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ABSTRACT

Phase 1 evaluation results of a demonstration project in career education are summarized in this report. (The program was designed to meet established goals and objectives through a series of guidance units administered to students in the classroom by teachers as part of the regular curriculum. General conclusions and recommendations are reported based on results of the formal field test of eleven guidance units and the attainment of ten staff product objectives. Conclusions presented include the following: (1) Nine of the ten staff product objectives were accomplished satisfactorily; (2) only one of the three elementary units was field tested during 1973-74; only in five of twenty-three objectives were there statistically significant differences between experimental and comparison students; (3) significant differences in the growth of experimental and control students were achieved on at least one of the objectives of each of the four units at the junior high school level; (4) no significant differences in the growth of experimental and control students were achieved on the objectives of three of the senior high school program's six units. Appendixes contain instruments used in the assessment of staff product objectives, results of the current status assessment, and items and results of attitude sections and help inventory sections of the survey tests for the junior high school program. (TA)

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August 1974

Evaluation of Mesa Public Schools' Project: "Demonstrating the Planning, Implementation, and Evaluation of Developmental Guidance, Counseling, and Placement Components in a Career Education System"

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I. INTRODUCTION

This document is the evaluation report of a demonstration project in vocational education titled Demonstrating the Planning, Implementation, and Evaluation of Developmental Guidance, Counseling, and Placement Components in a Career Education System. This project is part of the larger, continuing effort of the guidance department of the Mesa Public Schools to move toward an accountability model of guidance services in which results are evaluated in terms of outcomes based on observable student behaviors. Student and societal needs are addressed in a deliberate manner through a series of specific student experiences designed to meet established goals and objectives.

In building accountability for counselors into their program, staff of the guidance department have:

1. Conducted a detailed assessment of students' needs;
2. Described the status of their current program;
3. Defined aspects of a recommended program based on student needs; and
4. Prepared and tested elements of the recommended program.

Efforts to identify and develop staff competencies necessary to deliver the recommended program were also made.

To date, the program's major vehicle has been a series of guidance "units" based upon need statements and administered in the classroom by teachers as part of the regular curriculum. Some aspects of the program have been implemented at each junior and senior high school and at nearly half of the elementary schools in Mesa. All 32 counselors in the district and 97 teachers have participated this year. More significantly, over 6,000 students from kindergarten through twelfth grade have experienced parts of the program.*

Initially, members of the Youth Development Research Program of the American Institutes for Research served as part of the team that conceptualized Mesa's new guidance program. They helped provide direction and focus to the planning and supplied resources and procedures to help accomplish preliminary program

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* For further background on the history of the Mesa program see "Toward Accountability: A Report on the Mesa Approach to Career Guidance, Counseling, and Placement."

development activities. As progress toward accountability has been made, AIR staff moved more into a consultant's role. This year, their major responsibility was to assess the results of the formal field test of 11 guidance units and the attainment of 10 Staff Product Objectives while monitoring staff procedures.

This report summarizes that work. General conclusions and recommendations based on the two types of assessment are presented in the following section. The next two sections discuss staff products and procedures. The final three sections give information to answer the question that is at the heart of accountability--Did the program help students achieve outcomes related to their needs?

II. GENERAL CONCLUSIONS AND RECOMMENDATIONS

Before presenting the conclusions and recommendations derived from each major section of this report, the AIR evaluators would like to state one very general conclusion and make three general recommendations.

Based on our close association with the Mesa project over the past three years, we feel the staff of the guidance department should be commended for their efforts to become more accountable for the services they provide. They have engaged in a dramatic, pioneering venture that involves a major transition in counselors' role in the schools and focuses attention on the results counselors' activities have in terms of students' behaviors. It is to be expected that the progress of a large new effort will not always be smooth, but the effects of the project at Mesa are significant and worthwhile. We expect that the benefits to Mesa's students will continue to grow as the project's staff resolve the problems that have been identified in the Phase I field test.

The first general recommendation we would like to make concerns the results of the evaluation of the field test. We believe they should be used to improve the project during Phase II. It is premature at this stage of the project's development to draw conclusions about the impact or lack of impact of the units as is done in a summative evaluation. We recommend that the evaluation results be used in a formative manner. Mesa staff, at this time, should concentrate their efforts toward improving the units- focusing especially on the specification of sound goals and objectives, and the identification of appropriate and effective activities to help students achieve goals. The implementation of units and the evaluation of them should also receive critical attention. Decisions about the true effect of the units on students' knowledge, attitudes, and behaviors should only be made after near perfect materials receive an optimal field test.

The second general recommendation concerns new units the project will produce during Phase II. We suggest that, after their goals and objectives are written, developers conduct an extensive search for commercially available materials to form the basis of student activities. If appropriate materials can be located, a considerable saving of time and effort is likely to result.

The third general recommendation concerns expanding the focus of the Mesa program. Mesa staff are already considering guidance strategies to supplement the use of individualized counseling/learning units implemented through the regular curriculum. We would like to encourage this and suggest such strategies as group counseling sessions, career resource centers, exploratory work experience programs, and placement activities for Mesa's continued investigation and possible implementation.

Assessment of Staff Product Objectives

Conclusions

In general, it is apparent that Mesa staff members have fulfilled the commitments they made for Phase I of the project. As discussed in Section III of this report, nine of the ten product objectives have been accomplished satisfactorily. The one objective that was not met was the least significant of the ten, and we can find little fault with the staff's decision to focus their attention elsewhere.

Recommendations

The following recommendations are listed for the consideration of project staff during Phase II.

1. Upgrade and continuously update the summary document resulting from Staff Product Objective 1 so that it is appropriate for dissemination and produce a "very acceptable" description of the field test settings to achieve Staff Product Objective 3. This activity would contribute to project coordination and reporting, and the products would also enhance dissemination efforts. The summary of goal statements and student performance objectives could provide an excellent and efficient orientation to the direction, depth, and scope of the project. The description of the field test settings would assist districts interested in pursuing cooperative arrangements for local implementation of project components in determining the adaptations necessary to make the components appropriate to their settings.

2. Continue and improve the staff development efforts in the unit development process so that high quality units to meet student needs may be produced at lower cost. These units might include more commercially available resources and supplemental activities students pursue outside the classroom.

3. Accelerate progress in articulating guidance programs across academic levels and maintain and increase coordination with other components of the school system so that ultimately students will receive comprehensive assistance in meeting career needs in all areas of their lives.

4. Initiate the development of procedures that will allow the calculation of cost/effectiveness ratios for the attainment of individual student objectives. The type of evaluation that is reported in this document permits conclusions about the effectiveness of the field tested guidance programs in assisting students to reach specified outcomes. A rigorous evaluation should be a part of the efforts in Phase II. Means to relate cost data to the attainment of individual objectives on a per pupil basis should be explored in order to complete the accountability model the Mesa project is developing.

Assessment of Staff Procedures

Conclusions

Through informal monitoring procedures, we found the activities of Mesa's staff to be adequate to accomplish their Staff Product Objectives. We believe that communication and coordination can be improved and that this is being done.

Substantial positive unanticipated effects of the project were reported. The negative effects that were observed do not detract from the projects accomplishments. They merely indicate areas in which to focus efforts in the future.

Counselors appear to be making progress in aligning the allocation of their time to the program recommendations made in March 1972, but this progress is not consistent. It is better at some academic levels and in some areas than in others.

Recommendations

The following recommendations are listed for the consideration of Mesa staff during Phase II of the project.

1. Prepare and distribute a detailed time-task management chart which specifies the activities, responsible individuals, and schedule for Phase II of the project. This document will have positive impact in three areas. It will specify the division of tasks among Mesa staff and facilitate communication among those responsible for accomplishing project activities. It will permit efficient monitoring by the "outside evaluator", and it will enhance the coordination of project activities conducted by Mesa and AIR.

2. Supplement telephone communications between AIR and Mesa with exchanges of written memoranda and progress reports to avoid information gaps and misunderstandings.

3. Capitalize on the postitive unanticipated outcomes of the project and strive to overcome its negative effects as discussed in section IV.

4. Encourage and assist counselors at each academic level to bring their activities into alignment with program recommendations. Have counselors reevaluate their recommended program time allocations and readminister the current status assessment at the end of Phase II. Counselors' conceptions of the ideal guidance program may have changed now that they are more familiar with project goals and requirements. The readministration of the assessment instrument will determine if the trends observed are genuine and will continue to suggest areas where progress is needed.

Conclusions

The realization that only one of three elementary units was field tested during 1973-74 can be disconcerting. Couple that with the fact that on only 5 of 23 objectives were there statistically significant differences between experimental and comparison students; further frustration results. But, put all of this in context--this is pioneering work in elementary guidance. This essentially is the product of two counselors, not a large team of people! This entails a unit concept that requires much more student learning-counseling time than does any single student unit used at the junior or senior high levels. Within such a context, then, it is easier to appreciate what has been accomplished in the elementary grades and to set aside the potentially discouraging objective findings.

The three units scheduled for field tests during 1973-74 were pilot tested and massaged into viable learning-counseling packages. At the same time, work proceeded on the development of additional units. Sincere efforts were made to field test all three units, but that required continued cooperation from teachers and school administrators--cooperation that cannot always be guaranteed. To prepare for these field tests, innovative and potentially rigorous evaluation instruments and an experimental design were developed and given at least some preliminary pilot testing. The field test and data analyses of the one unit established a foundation of experience for what should foster an exemplary effort during 1974-75. These statements summarize the successes the evaluation team believes occurred in Mesa's elementary school guidance programs. There is an urgent need to capitalize on these positive conclusions; the following recommendations are stated with that mission in mind.

Recommendations

As in the following junior and senior high school sections, two types of recommendations have been considered. First are those that relate to improvements and extensions in the unit revision and development process. The second type focuses on strategies for future modifications in the field tests of those units.

1. Unit revisions

   a. Reduce the number of unit objectives by grouping those related ones and summarizing each group as one observable student behavior. Devote more attention to deciding what evidence you would accept that students have in fact achieved the objective.

   b. State outcomes as either more positive or negative changes in attitudes with the appropriate behavioral outcome associated with the attitude change.

   c. Insure that these objectives do not tie so closely to the unit activities; they must stress outcomes students will achieve when they have participated in those activities.

   d. Concentrate on more generalizable skills. Many of the current objectives suggest that primary students are not able to learn transferable skills. The result is a belief that if their performance on those objectives is not assessed immediately after a series of unit activities, students' achievements will not hold up. Such a belief might result from tying objectives too closely to unit activities.

   e. With improved objectives, before unit revision and development tasks are initiated investigate the appropriateness of these desired outcomes for the target students. Some of the objectives of the available three units did not seem to involve a challenge for "Level One" students. Others could be perceived as having questionable career development relevance. The recommended investigations should include student assessments as well as reactions from teachers, parents, and developmental psychologists.

   f. Before pilot tests, submit unit drafts to at least two reviewers who have expertise in elementary school guidance and developmental learning.

   g. Avoid the tendency to develop all units from "whole cloth." To expedite the unit production process (in quality as well as quantity), efforts must be made to search out and incorporate potentially beneficial student resources currently available in the published literature. A unit production approach staffed by one person seems unwise in light of what must be accomplished in grades K-6 during Phases II and III.

2. Field test improvements

   a. All three available units and those developed and pilot tested during Phase I must be field tested in Phase II. School commitments must be made early and maintained. Alternate settings, "just in case," must be identified and preliminarily involved.

   b. Consider closely whether pretests are possible since they certainly are desirable. It is only in this way that student growth can be measured.

c. Inter-school comparisons must be possible. Hopefully, that element of the quasi-experimental design can be employed during Phase II field tests.

d. Implement more solid pilot tests of the evaluation instruments. The evaluation staff continues to be excited about the innovativeness of the story simulations and interviews developed in Phase I. However, they are convinced those need to be thoroughly piloted and revised. Any minimization of the use of the story simulation approach on the basis of Phase I data would be unwise at this point.

e. Remember that the use of criterion-referenced items for evaluation and decision making evaluates each student's progress against criteria that are appropriate for him. This measurement approach does not compare his performance to that of other students--as occurs in traditional norm-referenced assessment. Requests to add more "detractors" to instrument items suggests that the intent is to fool the student, as in the latter type of assessment indicated above. Criterion-referenced testing assesses each criterion (i.e., each stated student outcome), not the material used to teach the criterion. Test items must match the criterion and theoretically could be written without seeing the material used for instruction. Criterion-referenced testing does not seek a distribution of scores or a ranking of students. It measures students against the stated student outcomes. Therefore, the expected distribution of student achievement will be different from the expected student achievement in norm-referenced tests.

Conclusions

Significant differences in the growth of experimental and control students were achieved on at least one of the objectives of each unit included in the field test. Under the more favorable treatment conditions, Part II of the junior high school program seemed quite effective in helping students achieve the goals of the units "Emotions" and "Love." With available data, it cannot be determined exactly how effective the junior high school program was in contributing to the development of students' personal and social behaviors, but it certainly seems promising. This conclusion is supported by evidence obtained through other aspects of the evaluation.

While major behavior changes resulting from the units were not reported by students (the instrument on which they would be reported was administered only to students who received the weaker treatment, however), these students did note that the program had helped them achieve its goals. A slight positive effect on students' attitudes was also observed. In general, over the course of the treatment, they seemed to increase their agreement with the goals of the program and decrease their embarrassment at receiving help in school to achieve these goals.

Students found most of the activities included in the units interesting and useful in helping them achieve unit objectives. They considered the reading level about right or easy for them. In all, the program was well received and considered appropriate by students.

The parents of students who worked on units of the junior high school program expressed strong agreement with the goals of these units and the idea that their children would receive help in school to achieve these goals. At the time they were surveyed, however, parents seemed to lack information about the program.

Most of the teachers who participated in the field test received the units favorably. They considered three-fourths of them to be effective in assisting students to meet unit goals, and felt all units were generally valuable and interesting to students.

In summary, the junior high school program can be considered a success.

Recommendations

Two general types of recommendations related to the junior high school program are listed for the consideration of Mesa staff during Phase II of the project. The first type concerns suggestions for improving the units, and the second applies to the field test of the units.

1. Unit revisions

   a. Continue efforts to improve the goals and objectives of the units. Insure that goals clearly specify how students who have fulfilled a need will be different than those who have not, and that the objectives that operationalize the goals are comprehensive in terms of student behaviors and sequenced in terms of student development.

   b. Add activities to the units to make them more stimulating to some students. Make sure that the activities relate to unit objectives and are appropriate to the age-level of students who receive the program.

   c. Consider ways to overcome students' concern that the units are too personal.

   d. Delete repetitious material from the units.

2. Improvements in field test procedures

   a. Select staff who are enthusiastic and motivated to teach the units. The effectiveness of a theoretically good program can be undermined by a poor implementation of it.

   b. Resolve the issue of whether teachers are to use the units only as guides or are to follow them rather closely. Then train and monitor teachers to insure that they abide by the decision, and that all students receive a similar treatment. When it cannot be determined if teachers implemented the units as intended, program effects cannot be distinguished from teacher effects.

   c. Make sure that adequate time is available and used for the treatment.

   d. Encourage the community Counseling Advisory Council to initiate a campaign to inform parents about the guidance program.

   e. Continue and improve the evaluation of the Phase II field tests of the program so that secure conclusions may be drawn related to the program's impact on students' behaviors. Revise the instruments so that they are appropriate for the assessment of students' attainment of revised objectives. Continue to assess the unanticipated effects of the program, but do so more directly with shorter instruments. State a rigorous research design for the evaluation, and implement it with care. Try to randomly assign students to experimental and control groups, to pre- and posttest experimental and control students at the same time, to increase the response rates to evaluation instruments, and to devise procedures to assess the long-term effects of the program.

Assessment of Student Outcomes - Senior High School Level

Conclusions

The senior high school program seems to be somewhat effective in limited areas. No significant differences in the growth of experimental and control students were achieved on the objectives of three of the program's six units. It cannot be determined with certainty if this was the result of the quality of the units, the quality of the treatment students received, or weakness in the implementation of evaluation procedures. Significant differences occurred on one objective of the unit "Trends," but this result is not sufficient to consider the unit effective in helping students meet its goal.

The units "Who Am I," and "Exploring Goals" may be considered effective in helping students assess their personal characteristics, evaluate this information, and explore career areas. Essentially, the units helped students achieve goals related to the completion of these activities.

Conclusions about the overall impact of the units in terms of student outcomes cannot be drawn from available data. However, the open-ended comments made by the relatively small numbers of parents, teachers, and students who responded to the evaluation instruments containing these questions indicate that the units may have helped some students locate career information and make tentative career choices.

In general, students agree with the goals of the units of the senior high school program and want help in school to achieve these goals. The program does not appear to have had any effect on students' already favorable attitudes, but after experiencing it, most would recommend that other students be given the opportunity to work on similar units. Students found the reading level of the units about right or easy for them, but they were divided in their opinions of the interest level and usefulness of the units. As stated earlier, open-ended comments of students show that some of the units may have been helpful in assisting them to achieve unit goals, but firm conclusions cannot be drawn because so few students responded.

Those parents of students participating in the field test of the senior high school program who responded to the Parent Reaction Survey seemed fairly well informed about the program and in agreement with its goals. They also agreed with the fact that their children were receiving help in school to achieve these goals. Their comments were generally supportive of the program, but once again, the response rate to the survey was too low to permit drawing conclusions.

The four teachers who participated in the field test expressed fairly favorable opinions of the units. They considered them of good quality and felt they were usually helpful to their students. However, teachers believed that their students' reactions to the program were not as positive as their own. Teachers suggested improving the format, vocabulary and variety of materials included in the units.

Recommendations

As was the case in the preceding sections, we offer two general types of recommendations regarding the senior high school program for the consideration of Mesa staff during Phase II.

1. Unit revisions
    a. Improve the goals and objectives of the units so that they state outcomes students are expected to achieve as the result of their participation in unit activities.
    b. Make the student and teacher versions of the units consistent whenever possible, simplify the format of the units and insure that the activities they contain are appropriate and effective in assisting students to achieve unit goals and objectives.
    c. Add alternative activities to the units so that students of different ability levels can participate in tasks that are exciting, meaningful, and appropriate to them.

2. Improvements in field test procedures
    a. Enable the high school division chairman to work with teachers who are implementing the program to help them increase the individualization of unit presentation and improve the enthusiasm of students working on the units.
    b. Continue and improve the evaluation of the Phase II field tests of the program so that secure conclusions may be drawn related to its impact on students' behaviors. Revise evaluation instruments so that they are appropriate for the assessment of revised objectives. Explore alternatives to the self-report evaluation procedures used to assess students' completion of activities. Improve the response rate to evaluation instruments.

III. ASSESSMENT OF STAFF PRODUCT OBJECTIVES

Objectives

In the December 15, 1972 proposal for this project, the counseling staff of the Mesa Public Schools committed themselves to achieving ten product objectives. These objectives are listed in the section that discusses the results of their evaluation.

Instruments and Procedures

A standardized criterion checklist was used by AIR staff in mid-June, 1974 to review and assess the quality of the products described in objectives 1-5. Each product was rated "very unacceptable", "unacceptable", "acceptable", or "very acceptable" according to criteria specified for each objective and each rating category. Objectives 6-8 and 10 were assessed by use of a questionnaire completed by the project director in mid-June 1974. Responses to two or three items for each objective were required. The questionnaire also asked that any positive or negative unanticipated effects resulting from the activities necessary to accomplish any of the staff product objectives be noted. Copies of these instruments are included in Appendix A and a discussion of the results of their application follows.

Objectives and Results

Staff Product Objective 1: To produce an approved, written summary of all goal statements and student performance objectives for developmental career guidance, counseling, and placement programs at grades K, 1, 2, 7, and 10.

Staff Product Objective 1: This product was rated "acceptable". Goal statements and performance objectives were listed, but were presented in a different format for each academic level. The document is perfectly adequate for in-house use but would require restructuring and polishing to be appropriate for external dissemination.

Staff Product Objective 2: To have a summary of all career guidance, counseling, and placement activities which are potentially effective for helping students achieve the measurable objectives specified in Staff Product Objective 1. These activities must assist each student to select and achieve both short- and long-term goals and to find educational experiences which are functional to his career goals. Such activities should be organized into units (or packages) which outline: (1) desired

student outcomes phrased as student performance objectives; (ii) the suggested activities and resources keyed to each objective; and (iii) objective-based evaluation procedures and tests which will both help students assess the extent to which they achieved their objectives, as well as provide data for this project's accountability system.

Staff Product Objective 2: Activities considered effective in assisting students to achieve their objectives were summarized in the form of units containing the three elements listed in the objective. For now, these units were rated as "acceptable" on the specified criteria. Continued field testing of the units, and follow-up studies of students who have experienced them will be necessary to determine if the units can be rated as "very acceptable".

Staff Product Objective 3: To have an approved, detailed description of the exact settings in which the guidance activities identified in Staff Product Objective 2 will be implemented with students in grades K, 1, 2, 7, and 10 in the demonstration schools.

Staff Product Objective 3: A rating of "unacceptable" was assigned to this product. A detailed description of the field test settings was not received. With the data available in the district, we have confidence that one could be prepared quickly, however.

Staff Product Objective 4: To have for dissemination during Phase I at least 12 career guidance units, instructional-counseling resources, tests, and descriptions of support services keyed to youth-oriented objectives.

Staff Product Objective 4: Twenty-four career guidance units had been prepared by the project for printing and dissemination as of May 1974. Eleven of these units (1 at the elementary level, 4 at the junior high school level, and 6 at the senior high school level) were field tested during the 1973-74 academic year. Each of the field-tested units would be rated "acceptable" under staff Product Objective 2. Therefore, a "very acceptable" rating has been assigned to Staff Product Objective 4.

Staff Product Objective 5: To have for dissemination during Phase I at least 3 competency-based training packages and provide consultations for the training of professional and paraprofessional counseling personnel who wish to acquire and practice skills in planning, designing, implementing, evaluating, and revising programs and resources in this career planning and development model.

Staff Product Objective 5: As of June, 1974 drafts of 4 competency-based training packages had been produced. An edited version of one of these packages was prepared for dissemination, but the other packages could be reproduced and distributed on request. This staff product objective was rated "acceptable".*

Staff Product Objective 6: To have trained counseling personnel (e.g., teachers, counselors, and counselor aides) who will implement the proposed career guidance, counseling, and placement programs in each of the demonstration schools at the elementary, junior high, and senior high levels.

Staff Product Objective 6: This objective was achieved. A comprehensive list of the teachers, counselors, and counseling paraprofessionals who participated in implementing the field test of the career guidance units in the demonstration schools was prepared. These individuals received special training for their roles as counseling personnel in the career guidance program and continuous supervision of their activities in the field test was provided by the Division Chairman of each academic level. Additional staff development efforts this year were directed toward the production of the individualized training described in the preceeding objective. These transportable resources will be available to counseling personnel who participate in the project in subsequent years.

Staff Product Objective 7: To have demonstration schools which are equipped with the materials and resources needed to implement the selected career planning and development programs.

Staff Product Objective 7: This objective was also achieved. All items on the media resource list of each unit used in the field test were available at the six demonstration schools (three at the elementary level, two at the junior high school level, and one at the senior high school level), and 15 other schools in which elements of the program were implemented (ten elementary schools, four junior highs and one senior high).

Staff Product Objective 8: To demonstrate (for site visitors) students actually using the career units and tests while working with project-trained personnel at the elementary, junior, and senior high school levels.

*A more detailed discussion of conclusions and recommendations related to Staff Product Objective 5 can be found in the evaluation report of Mesa's Title III project: Jones, G.B., and Helliwell, C.B. Evaluation of the "Accountability for Counselors" Project of the Mesa Public Schools Guidance Department. Mesa, Arizona: Mesa Public Schools, 1974.

Staff Product Objective 8: Once again, this objective was definitely achieved. A list of 122 individuals representing educational institutions at all academic levels (including universities), business establishments, and government agencies from across the nation describes visitors to the project. Visitors received an administrative overview of the project including a tape/slide presentation, and summary booklet "Toward Accountability" prepared especially for dissemination purposes, and were provided with sample student materials. Whenever possible, they visited demonstration schools at a grade level appropriate to their interests, observed students actually working on the units under the direction of teacher/counselor teams, and conversed with students and staff to receive feedback on the field test.

Staff Product Objective 9: To produce an approved, written evaluation rationale which describes the evaluation design and procedures, and lists instrument specifications for assessing the extent to which youth (i.e., in grades K, 1, 2, 7, and 10) in the demonstration and comparison schools have achieved their career planning and development goals and objectives.

Staff Product Objective 9: No special instrument was designed to assess this product. It was considered achieved when the project's Research and Development Committee and project monitor approved a memo from Dr. G. Brian Jones, Director, Youth Development Research Program, American Institutes for Research, to Mr. Byron McKinnon, Director of Guidance, Mesa Public Schools dated 24 October 1973 and titled "Update Evaluation Design and Schedule for Phase 1 (1973-74) of the Vocational Education Act Part D Project: Demonstrating the Planning, Implementation, and Evaluation of Developmental Guidance, Counseling, and Placement Components in a Career Education System."

Staff Product Objective 10: To have cost-effective career programs (or components of these programs) which can be readministered during Phase II of this project while other activities are being revised or replaced. These must be programs capable of successfully meeting the changing career planning and development needs of youth as well as the changing needs of society.

Staff Product Objective 10: This objective may be considered to have been achieved at this stage in the evolution of the project. All components developed during Phase 1 of the project (student units, staff development units, evaluation instruments and procedures, and dissemination information are available in revised form for continued implementation during Phase II. The effectiveness of a portion of these components is

discussed in this report and elsewhere.* A cooperative arrangement entailing considerable savings in development costs is being instituted to make these components available to other districts. A detailed accounting system of all project expenses has been maintained to provide the opportunity for interested individuals to analyze cost factors. Although it is not yet possible to relate costs to specific program outcomes, cost estimates for program components that can be implemented by other districts through the cooperative arrangement are available.

Several steps have been taken to make student materials more cost-effective and adaptable to the changing needs of youth and society. At the elementary level, units have been designed to allow individual pages to be updated and replaced. Designs and patterns for teachers to use in resource development have been included. At the junior and senior high school levels, consumable sections of units are separated from the reusable portions to reduce printing costs. A plan to develop modules for each individual student objective in order to facilitate revision and updating is projected.

Conclusions and Discussion

The results presented by Staff Product Objective in the preceding section support the conclusion that the counseling staff of the Mesa Public Schools has fulfilled its project commitments. All but one of the ten objectives for Phase I have been achieved. Of the five objectives whose achievement was rated on a four-point scale of acceptability, three attained an "acceptable" rating, and one was rated "very acceptable". The one objective that was rated "unacceptable", Staff Product Objective #3, is perhaps the least significant of the ten in terms of its contribution to the project's main goal for students:

> "to assist students to select and achieve ... goals of personal significance and to insure that each student's educational experiences are functional to his career goals ..." (Project Proposal, p.ii)

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* Jones, G.B., and Helliwell, C.B. Evaluation of the "Accountability for Counselors" Project of the Mesa Public Schools Guidance Department. Mesa, Arizona: Mesa Public Schools, 1974.

Project staff should not be severely faulted for concentrating their limited resources on the activities that can be assumed to benefit students most directly.

At this point, a comment on the career guidance units field tested this year by the project is appropriate. They achieved an "acceptable" rating because they contained the three elements listed in Staff Product Objective 2. However, in the process of developing instruments to assess whether students had achieved each unit's objectives, we formulated certain observations regarding the quality of the units. These are briefly discussed here to provide input to the continuing unit development and revision process.

The three primary units on Interpersonal Relations, Self-Awareness, and Decision-Making represent commendable efforts in focusing instruction on these important but often neglected areas of the curriculum. The expected outcomes for student behavior could be more effectively assessed if they were more clearly separated from the actual instructional activities in the units. Many of the objectives are actually teaching points and are therefore of a different level of significance than the expected observable changes in student behavior resulting from those instructional activities.

The major emphasis is seen as developing individual student awareness of certain attitudes and feelings. The expected student outcomes should be stated as the behavioral manifestations of this awareness. This specification would also reduce the danger of teaching right and wrong answers in an area that is more appropriately defined as directional changes which are either more positive or more negative.

The units developed at the junior high school level represent a valiant, pioneering effort to help students meet needs in the areas of personal and social development. Their weaknesses most likely result from their authors' inexperience in developing objectives-based learning materials and a lack of completed units in the area to provide models and inspiration.

In several cases a unit's goal statement was merely a rephrasing of a high ranking need statement. These goals did not clearly specify how students who had fulfilled a need would be different than those who had not. The performance objectives written to operationlize these ambiguous goals did not

appear to be comprehensive in terms of student behaviors or sequential in terms of student development. Occasionally they were trivial or unrelated to the appropriate goal. Often, the instructional content of the unit was weak or relied heavily on the ingenuity of the teacher without providing useful structure. Some suggested activities were not related to the objectives for which they were presented.

The units written to help senior high school students in their educational and vocational development suffered from similar problems, but to a much lesser extent. Their major defects resulted from sloppily executed revisions of earlier drafts. Considerable effort went into preparing teacher-counselor supplements for the units, but frequently student materials were not revised to parallel the new teacher-counselor materials. In addition, the sequence of the program was changed and in at least two instances this required students to engage in activities for which they had not been adequately prepared.

Some of the worst deficiencies of the junior high school units were repaired during the process of developing instruments to assess students' attainment of their objectives. Other problems with these units and those at the senior high level will most likely be corrected during subsequent revision cycles. A staff training program in the unit production process has been designed and executed to increase the skill of members of teams developing and revising units at the junior and senior high school levels.

At the present time, the articulation of the units across the three academic levels is incomplete. The elementary and junior high school units tend to focus on personal and social behaviors while the senior high school units concentrate more on the student's educational and vocational development. New units are now being written to fill some of these gaps. The Scope and Sequence Committee has begun preliminary planning to resolve articulation concerns. It has also initiated the conceptualization of a dynamic model for developmental guidance which will ultimately link the statements used in the needs assessment to behaviors identifying student's degree of development.

IV. ASSESSMENT OF STAFF PROCEDURES

Procedures

The "Updated Evaluation Design and Schedule . . . " written to accomplish Staff Product Objective 9 presented a plan to assess the process objectives stated in this project's proposal. These process objectives describe the procedures necessary to accomplish Staff Product Objectives 1-8 and 10. The proposed plan required that a time-task management chart for the project be prepared so that monitoring of the schedule and extent to which each process objective was attempted and achieved could be accomplished. A detailed breakdown and schedule of tasks was not received; formal monitoring keyed to process objectives could not be done. However, informal monitoring of staff procedures was conducted during several Research and Development Committee Meetings and National Advisory Committee Meetings and through telephone conversations and correspondence.

Results

As noted in the preceeding section, 90% of the Staff Product Objectives written for this project were attained. Hence, it can be stated that the procedures necessary to accomplish these objectives were executed in an "acceptable" fashion, even though it was not possible to monitor the completion of specific process objectives.

Unanticipated Outcomes

The unanticipated outcomes of the procedures employed to accomplish Staff Product Objectives 1 - 10 were assessed by the Project Director and recorded on the questionnaire he completed to measure the attainment of Staff Product Objectives 6-8 and 10. The outcomes that were reported are listed below.

Staff Product Objective 1:

Positive -

It allowed us to quickly observe which needs statements had not yet been developed.

Provided a basic implementation plan for the development of further units. It demonstrated the need for a gestalt statement and developmental sequence program.

Staff Product Objective 2:

Positive -

Many teachers who used units early in the year observed that they got to know the kids much better and earlier than they had without the units.

Materially improved relationships between counselors and staff at participating schools (teachers, administrators, counselors, etc.)

More students sought personal counseling as a result of studying the units.

Increased awareness and positive support from administrators relating to the overall guidance program.

Substitute teachers coming into classes where units were implemented found it much easier to have a successful teaching experience because of the detailed instructions contained in the units.

Negative -

Reactions from a small number of parents who felt that some parts of some units were an "invasion of privacy" and that they preempted some parental prerogatives.

Realization that there was insufficient provision for slow learners.

Inability of counseling staffs to meet increased demand on their time for personal counseling while at the same time effectively assisting teachers in the implementation of the units.

Staff Product Objective 3

Negative -

Subsequent changes in school boundaries, staffing and program made it impossible to maintain projected sites.

Staff Product Objective 4:

Negative -

Much greater demand from sources outside the district for completed copies of all materials.

Difficulty in providing necessary copies both for in-house use and outside dissemination.

Negative reactions from teachers because of too many additional curriculum requests such as this.

Staff Product Objective 6*:

Positive -

Able to make significant revisions locally on existing units.

Negative -

Lack of sufficient space for counseling personnel because of increased staff.

Staff Product Objective 7:

Negative -

Lack of sufficient storage space.

High cost of locally producing materials

Staff Product Objective 8:

Positive -

Guests were overwhelmed at the openness and availability to observe teaching of the units.

Staff Product Objective 9:

Positive -

Disciplined us in the developmental process to write measurable objectives

Caused us to reevaluate existing P.O.'s and activities for measurability.

Negative -

Extreme difficulty in measuring affective domain.

The need to collaborate in much greater detail than anticipated with AIR evaluator(s).

Because of the lateness in the design timelines, one unit, "Friends" at the junior high level, was not included in the evaluation process.

Staff Product Objective 10:

Negative -

Demands of the project have been so heavy that it has been very difficult to analyze the cost-related data.

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* Unanticipated outcomes resulting from procedures employed to attain Staff Product Objective #5 are discussed in the June 1974 report of Mesa's ESEA Title III project which was referenced in the preceeding section of this document.

Counselor's Activities

A final consideration regarding staff procedures is the measurement of the degree to which counselors' activities have changed during the course of the project. An indirect indication of this was provided by the administration of a revised version of the "Current Status Assessment" instrument originally completed by counselors in the Mesa district in March, 1972.

The instrument was simplified to reduce the burden on counselor time necessary to complete it. The original instrument asked counselors to estimate the percent of their time spent on approximately 30 specific objectives in each of four major categories of counseling outcomes. Counselors were requested to add categories to include activities that did not fall in the four major categories. For the revised instrument, the specific objectives were placed in an appendix and the categories of counseling activity that counselors added to the March, 1972 instrument were listed. These "added" categories were slightly different at each academic level (elementary, junior high and senior high) so three instruments were prepared. Counselors estimated the percent of their time spent in 8-12 categories of activity. They could refer to the appendix to see the specific objectives that defined four of these categories. Once again, they could add categories to cover any of their activities that did not fall in the categories listed on the instrument.

Copies of the instrument were distributed in May 1974 to each counselor in the district by the head counselor of his school. Every counselor responded. Time estimates for each of the 8-12 categories of counselor activity were averaged for each of the three academic levels. Where possible, categories added by counselors were combined with existing categories. Where they were unique, a new category was created.

The summary of the results of the May 1974 administration of the Current Status Assessment instrument is presented in Appendix B. The results of the March 1972 current status assessment and a summary of the program counselors recommended as the "ideal" allocation for counselor time are included for comparison.

Two difficulties in the interpretation of the tables in Appendix B should be mentioned briefly before the discussion of the degree to which counselor activities have changed is presented. The first represents only a minor problem.

The current status assessment instrument administered in May 1974 was based on the categories used to present the summary of the results of the March 1972 assessment. These categories differ slightly from those that were used to describe counselor time allocations in the recommended programs at the elementary and senior high school levels. Notes on the bottom of Tables 1 and 3 suggest ways to make comparisons between the two sets of categories. The second difficulty is more significant. Only a portion of the schools in the district participated in the formal field test of the guidance units developed by the program. It is likely that changes in counselor time allocations that might result from the effects of the field test are diluted by the averaging process necessary to produce the summary statistics. Unfortunately, with the present data, this problem could not be resolved.

An examination of Table 1, Elementary School Program, shows that the recommended elimination of non-counseling registration and attendance activities has been achieved. An even greater reduction of counselor time that was recommended occured in the categories of academic learning counseling, educational-vocational counseling, interpersonal counseling, intrapersonal counseling and conducting and receiving in-service training. The greatest amount of counselor time currently spent in the elementary guidance program occurs in the category of program development and implementation. This increase is most likely to be even greater than recommended. Elementary counselors appear to spend more time in program development and implementation than in actual counseling. To date, they do not appear to have achieved the balanced spread of involvement that was desired. This can be attributed to the demands of developing materials that teachers may use to meet the needs of greater numbers of students than the two elementary counselors could possibly help individually. When the materials are completed, a reassessment of counselor activities during a period of "normal" functioning may show that the recommended program has been more closely approximated.

Table 2 shows that discrepancies in the amount of counselor time spent in the various categories of guidance program activity were not large between the 1972 junior high school program and the recommended program or between the program in 1974 and what was recommended. The fact that the percentage of counselor time spent in interpersonal counseling and intrapersonal counseling is currently below what was recommended may be due to increases in time spent

on educational-vocational counseling, providing teacher-staff counseling, and the career guidance program.

Initially, it may appear disturbing that in six of the eleven categories of guidance activity, the shifts in percentage of counselor time have either been in a direction away from that which would be required to achieve the recommended program, or when the change has been in an appropriate direction it has been too large and has exceeded the program recommendation. This concern may not be too meaningful, however, because the actual junior high school programs in 1972 or in 1974 have not varied greatly from the recommended program. This would be even more evident if, instead of creating a new category in 1974, the counselor time that was assigned to the career guidance program category had been distributed equally between the existing categories of interpersonal and intrapersonal counseling which are the focus of the career guidance program at this level this year. In any case, the current activities that constitute the junior high school program may bear a reexamination in terms of the recommended program for this academic level.

For the senior high school program, Table 3 shows that the changes in percent of counselor time between March 1972 and May 1974 in the categories of academic learning counseling, educational-vocational counseling and intrapersonal counseling were in the recommended direction. The same is true in the non-counseling activity categories of conducting student registration and handling attendance concerns. A great deal of reduction in the amount of time counselors spend in registration activities is still necessary before the program recommendation to eliminate this type of effort is achieved, however. The activity categories of maintaining guidance program organization and implementation and engaging in program research and development are not receiving nearly the amount of counselor time that was recommended. The senior high school program must further reduce the burden of time that registering students places on counselors so that they can devote time to program research and development, and organization and implementation.

Conclusions and Discussion

Although the execution of the procedures necessary to accomplish the Staff Product Objectives was rated "acceptable", evidence of the type of mild disorganization that frequently accompanies a new, major undertaking was observed. Advance planning and scheduling of tasks was not performed adequately. This may be due in part to the need to identify task requirements in the process of accomplishing them. In the early part of the school year, project responsibilities were not divided clearly between staff, and information flow regarding activities and schedules was sporadic. Significant improvements in this area appear to have been made. Finally, lack of communication in both directions between AIR and Mesa has occasionally hampered progress in completing project tasks.

The reported positive unanticipated outcomes of project procedures were substanitial. Need statements which the project should pursue in the future were identified, and the need for a framework to relate the various units at different academic levels became apparent. Units to help students fulfill the identified needs, a statement of a gestalt for the guidance project and a developmental sequence to structure unit relationships are being prepared. The increase in staff competencies resulting from the project enabled guidance units to be revised locally. The reputation of Mesa Public Schools as a leader in career guidance was enhanced through dissemination activities.

Perhaps the most significant general result of the project was the reported increase in interactions, understanding and support related to guidance among the various segments of the school system. Students, teachers, counselors, and administrators appear to be more aware of and involved in the guidance program as a result of the project.

Some of the negative unanticipated effects of the project related to management concerns that are likely to be solved now that they have been identified. Space for staff and materials, site selection, scheduling of evaluation activities, and complaints of excessive demands on the time of teachers, counselors, administrators are not trivial problems, but they can be overcome if sufficient resources and advance planning can be applied to them.

The remainder of the negative outcomes may be more complex to deal with, but existing elements of the project provide structures that may be employed in these attempts. The community Counseling Advisory Council represents a forum for the exchange of information and concerns between parents and project staff. The needs of slow learners are already being considered in the unit revision cycle. A cooperative arrangement is being pursued to ease the demands of dissemination responsibilities. Evaluation in the affective domain could become the topic of one of the staff development modules that will be written during Phase II of the project.

In summarizing the discussion of the unanticipated outcomes of the procedures employed to accomplish Staff Product Objectives 1-10 it should be noted that the positive outcomes were substantial. The negative ones, while substantial also, do not really detract from project accomplishments. They merely represent areas in which attention should be focused in the future.

In some cases, the readministration of the current status assessment instrument has highlighted areas in which counselors' activities have changed during the course of the project. In other areas the results proved inconclusive. Elementary counselors have eliminated non-counseling attendance and registration duties from their schedules and senior high school counselors have reduced the amount of time they spend on these tasks. Elementary counselors appear to have focused on program development and implementation and reduced their emphasis on actual counseling, and training for themselves and others. Senior high school counselors have made progress in the recommended directions. They must still work to reduce registration duties and increase the time they spend on the organization and implementation of their program and research and development for it if they are to achieve their initial recommendations. Results at the junior high school level are inconclusive. In general, the substantive changes in counselor activities across all three academic levels observed during the project were desirable or at least justifiable.

V. ASSESSMENT OF STUDENT OUTCOMES - ELEMENTARY SCHOOL LEVEL

Treatment

Three units dealing with personal and social behaviors and decision-making skills received extensive pilot testing at the elementary school level during 1973-74. These three, titled "Interpersonal Relations - Level One," "Self-Awareness -Level One," and "Decision Making - Level One," were scheduled for final revisions during the Fall of 1973 and field tests in the Spring of 1974. Level One signifies that the units were designed for 5 - 7 year old children. Since the format and process of these units differ sharply from those used at the junior and senior high levels, each of them are outlined below.

"Interpersonal Relations" contains 50 activities that primarily are teacher-led discussions; one activity per day and two per week are recommended to teachers. The general goal area on which this unit focuses can be represented by the following statements; to help each student:

1. Develop thinking and problem-solving skills and apply these in social interactions.
2. Get in touch with his feelings and understand how they affect his behavior.
3. Develop optimal communication skills and use them to communicate honestly and openly with others.
4. Know more about himself.
5. Initiate meaningful personal relationships with "significant others" and have an increased capacity to experience others as they really are.

The unit contains 50 student objectives expanding the above statements and providing one objective for each activity.

The "Self-Awareness" unit uses similar classroom activities to help students develop self-understanding in terms of awareness of senses, body parts, or feelings. This general goal is translated into 19 objectives; once again, one activity for each objective. If similar objectives are combined, these 19 can be reduced to 14. Eight objectives concentrate on expanding student's awareness of their senses (e.g., using touch to identify identical objects and identifying one way touch conveys feelings). Awareness of body parts entails two objectives, while awareness of feelings is covered through five objectives.

The final unit, "Decision Making," seeks to help each student make decisions and solve problems. Teachers using this unit guide students through individual and group decision-making activities with an emphasis on the steps of the problem-solving process and the prediction of consequences for alternate problem solutions. Here 17 lessons are tailored to 14 objectives that are specific and very closely tied to the lessons. The objectives divide into two fairly clear categories: seven relate to individual and group decisions and their consequences; while the remaining cover the complete problem-solving process.

As mentioned earlier, all three units were prepared for field testing. However, only the first one was administered in a field test design. Data are available on its impact. Since school and teacher cooperation could not be maintained to carry out proposed tests of the second and third units, no evaluation data on their effects can be reported here.

Evaluation

Two types of criterion-referenced instruments were developed for each of the three units. The first was a structured interview to be administered to individual students by paraprofessional interviewers trained by the two counselors who designed these units and were responsible for their implementation. Students responses were to be tape recorded. Interviewers were free to talk with students in as informal an atmosphere as possible and the interview content could be analyzed and scored independently by trained evaluators. The interviews presented pictures, verbal cues, role play situations, and physical objects to which students were asked to react in various ways.

The second instrument for each unit presented a series of audio-taped stories and related questions to be administered by the interviewers. Each student was to listen to each story and then follow directions at the end of the tape in order to respond to questions about the story. The only writing the student was required to do was to mark his answer choice of a picture or simple word on a response sheet for each story.

The stories and interviews were pilot tested thoroughly and revised for two of the units. Unfortunately, these were the units that were not field tested. The counselor who developed the third unit pilot tested its evaluation instruments but

was not satisfied that this and the revision cycle was done as thoroughly as possible. She felt that the level of word and concept difficulty in the stories was beyond that which was appropriate for Mesa students. The other counselor improved her units' evaluation approaches based on her pilot test data. For example, she found some of the stories wordy but did not find serious problems with the difficulty level. On the other hand, she perceived that part of one of the interviews was too complex for her pilot test children. Appropriate modifications were made to abbreviate and simplify this interview.

A locally developed instrument was used to collect seven first grade teachers' reactions to the unit "Interpersonal Relations - Level One." The instrument included five scales measuring: (a) general quality of the unit; (b) ease of preparation for the unit; (c) ease of delivery of the unit; (d) teachers' perception of students' ability to understand content of the unit; and (e) clarity of instructions in the unit. The end points of each scale were marked, and teachers were asked to indicate where their opinions fell on the line joining the two points.

No other instruments were developed. Both counselors involved in the design and implementation of the three units strongly opposed collecting parent reactions since they felt that few parents were aware of this special program. Therefore, a parent reaction instrument was not designed.

In the quasi-experimental design recommended for each unit's field test, experimental students (ones working on a unit) and comparison students (ones receiving no special treatment) were to be randomly selected in each demonstration school. One demonstration school was to be identified for each unit. In addition to these within-school comparisons, comparable students in comparable schools were also to be included for between-school comparison purposes. Once again because of the young age of the children involved (this fact militated against excessive testing) and the perceived high probability that these students had no previous experience that would make each unit's objectives inappropriate, the counselors recommended that a post-test-only design be used. Finally, since the evaluation staff felt it would be exhausting for each student to be assessed on each objective of each unit, they recommended that 5 - 7 students in both the demonstration and the comparison classes (separately) be randomly assigned to the interview and story items for each objective tested. In this way, each student would be assessed only on the basis of 3 or 4 objectives.

For the "Interpersonal Relations" unit that was field tested, it was decided that too much evaluation time and energy would have to be devoted to assessing the extent to which students achieved desired outcomes presented in the unit's 50 objectives. Those objectives were highly specific, so evaluators looked for commonalities among them. This strategy produced 23 general objectives and it was on these that the evaluation concentrated.

The single field test was conducted at Adams Elementary where the student population is quite typical of the ethnic distribution found in the district as a whole. Adams' students are predominantly Anglo (85.7%) while 13.08% of them are Mexican. Four first-grade classrooms were contained in the Adams school. For the field test, teacher names were randomly selected for two experimental and two control groups. Each classroom had 20 students, 10 of whom were administered 7 of 10 stories while the other 10 responded to the remaining stories and the two interviews. The composition of participating students at Adams was as follows:

Treatment Group	Females	Males
Experimental	18	22
Control	19	21

Data were collected only for students at this school. The between-school comparisons were not possible.

Two interviewers were employed. Both of them had college training in education and are students at Arizona State University. In addition, they were specifically trained for administering the two instruments used in this study. They were unaware of the objectives of the field tested unit and did not know the experimental or control identity of the students they interviewed. Each of them interviewed 20 experimental and 20 control students. As a last step, they scored student responses according to a standardized set of instructions for which they were trained.

Analyses and Results

All data were hand scored by the two interviewers and one counselor using directions initiated by the evaluation staff but approved (after modifications) by both groups. Chi square tests were used to assess the level of significant differ-

ences between results obtained by the two groups of students. More specifically, the number of experimental students who achieved an objective was compared with the number of control students demonstrating similar results.

Of the 23 objectives that were assessed, impressive differences (i.e., greater than the .01 level of significance) favoring the experimental group occurred on 5 of them. It is also interesting to note that many children gave silent or "I don't know" responses to interview questions but the majority of these came from students in the control class (i.e., 397 compared to 280).

An overlay ranging from 0% to 100% was used to quantify the opinions teachers expressed on each scale on the teachers' evaluation instrument. The average opinion for each scale was then calculated. The average opinion of the general quality of the unit was 82%; ease of preparation was 84%; ease of delivery, 82%; students' understanding, 86%; and clarity of instructions, 75%.

Discussion and Conclusions

Since 5 statistically significant results could occur by chance when 23 Chi Square tests are performed, it would be inappropriate to place too much stress on the nature and importance of each of these findings. In addition, it is also unwise to assume that because all 5 resulted from interview data, either these data are suspect (because scorer judgment might have played a more important role in evaluating these more subjective responses) or the interview was a better evaluation procedure than was the story approach (because it called for student responses closer to those desired by the objectives). However, the obtained results provide information that should direct the subsequent development and evaluation efforts of Mesa staff. The major conclusion from this field test at the elementary grade level is that it was indeed implemented. To successfully "pull off" such a field test in the field of guidance is an impressive innovation in itself. To our knowledge, there are no precedents at the elementary school level. Not only was the event of the field test extremely encouraging, the fact that the counselor who was involved devoted a great deal of effort to make it rigorous and the fact that unique interview and story simulation approaches were used in the evaluation design are especially gratifying. The highly favorable response of teachers to the unit that was field tested further supports the impression that substantial progress is being made. Mesa elementary guidance has an excellent base on which to grow.

VI. ASSESSMENT OF STUDENT OUTCOMES - JUNIOR HIGH SCHOOL LEVEL

Treatment

At the junior high school level, four units dealing with personal and social behaviors were subjected to a formal field test. Although considerable additional program activity occurred at this level, only the results of the field tests evaluation will be reported here. Those goal statements and performance objectives of the units that were used for the evaluation are given in Figure VI-1. The units "Orientation" and "Someone to Talk To" formed Part I of the program. "Emotions" and "Love" comprised Part II.

Approximately 125 seventh grade students at Poston Junior High School completed the program in less than two weeks. Two teachers worked as a team to implement it early in January, 1974. The first day, a saturation treatment of three consecutive periods was tried, but this was reduced to two periods a day for the remainder of the field test when it was observed that student and teacher enthusiasm for the program was flagging. It was noted by junior high school division chairman that the unit "Love" received a very superficial treatment and that one of the teachers implementing the program did not participate wholeheartedly.

The program implementation at Powell Junior High School was considered much stronger. All seventh and eighth graders (over 800 students) received the program. Part I was taught in December 1973 before the evaluation instruments were prepared so there are no field test data for this half of the program. Part II was taught in April and May, 1974. Students spent about eight hours on each unit. They participated in the program about three to four hours per week integrating it into their end-of-year activities and field trips. More than 300 seventh grade students completed the Part II survey test so that the effects of this part of the program could be measured.

The responses of students who received the program were compared with those of approximately 60 students at Poston Junior High School who did not.

FIGURE VI-1

GOALS AND OBJECTIVES OF JUNIOR HIGH SCHOOL UNITS

ORIENTATION

200:00 Goal Statement

The student will become more aware of himself as an individual who has needs in the inter- and intra-personal areas, and will understand that there are career guidance units available to help him meet these needs.

200:01

When directed the student will indicate that he has an increased awareness of his inter- and intra-personal needs in junior high.

200:02

When directed the student will select the correct definition of the terms "social skill", "intrapersonal", and "interpersonal" and will distinguish between inter- and intra-personal goals.

200:03

When directed the student will identify the needs that are addressed by the career guidance units "Someone To Talk To," "Emotions", and "Love".

SOMEONE TO TALK TO

304:00 Goal Statement

The student will be aware that there are people to talk to when personal problems arise, and will be willing to share these problems.

304:01

When directed, the student will pick the correct definition of the term "significant other".

304:02

When directed, the student will indicate the qualities to look for in a significant other, and will recognize that for each student one significant other may be better than another.

304:03

Given a hypothetical problem situation, the student will indicate that he understands that there are many significant others who can help him with his problem and that different significant others can help him in different ways by identifying five appropriate significant others who can help him and one thing that each might reasonably be expected to do.

304:04

The student will indicate that he is more willing to seek help from a significant other when he has a problem.

304:05

When directed, the student will identify one problem of his own, determine with whom to consult, and have a consultation with an appropriate person.

EMOTIONS

401:00 Goal Statement

The student will get in touch with his emotions and understand how they affect his behavior and how people feel about him.

401:01

When directed, the student will define the term "emotions" by identifying five examples of emotions and stating one possible behavior for each example he identifies.

401:02

Given an improvisational situation, the student will identify one emotion and one behavior the situation might produce.

401:03

When directed, the student will identify at least two behaviors acceptable and two behaviors most people would agree are unacceptable according to the standards of his community.

401:04

The student will identify the best definition of the term "conflict" and in three cases will state an emotion that he has experienced, a behavior caused by this emotion, a reacting behavior of another person and indicate whether or not a conflict resulted.

401:05

When directed, the student will demonstrate his knowledge of emotions and their resulting behaviors.

LOVE

302:00 Goal Statement

The student will be able to give and accept love.

302:01

When directed, the student will indicate the best definition of the term "love" and will demonstrate that he recognizes there are different types of love and that there are different ways of expressing love.

302:02

The student will identify three people and/or things he loves or would like to love, and for each will identify two ways he expresses love or would like to express love.

302:03

When directed, the learner will state two ways his expression of love can be improved.

Existing classes were used to establish experimental and control groups at Poston, but students were not assigned to classes by any special scheme. Since all seventh and eighth grade students at Powell Junior High School received the units, no control groups could be established there. Junior high school students to serve as a control group that would be completely isolated from the effects of the program could not be found anywhere in the district. At least one of the units in the program was taught in each junior high school.

Evaluation

Several types of instruments were used to evaluate the effects of the program at the junior high school level. The first, a survey test with three main sections, was administered to experimental and control students before and after they experienced Part I and Part II of the program. The general design of the two survey tests was the same. In the first section, multiple-choice, true-false, and selection items were used to measure students' attainment of the units' objectives. Usually one item was included per objective. This limitation was necessary so that the survey tests could be administered in one class period. The survey tests also included an attitude survey and an inventory of help received related to the goals of the units.

In the attitude section of the survey tests students were asked to indicate whether they "strongly agree", "agree", "disagree", or "strongly disagree" with four statements related to each unit goal. These four statements dealt with: 1) the student's desire to achieve the goal; 2) the student's desire to receive help in school to achieve the goal; 3) if the student would be embarrassed to receive help in school to achieve the goal; and 4) whether the student would be glad to receive this help even though he might be embarrassed by it. The help inventory section of the survey tests asked students to indicate whether they had received help in school related to the goals of the units during the past six weeks. If they had, they were asked if the assistance they received had helped to produce a change in their behavior. If this was the case, students were asked to specify the behavior that had changed.

The second type of instrument, called a Student Reaction Sheet (SRS), was administered to experimental students at Poston Junior High School after they had experienced Part I and Part II of the program. Due to an oversight the SRS was not completed by students at Powell. The main purpose of this instrument was to solicit students' reactions to the units. Students were asked to indicate their degree of agreement with statements regarding the quality of specific activities included in the units, and whether they found certain activities interesting, or helpful in either learning something important or achieving the unit's objectives. Students' opinions of each unit as a whole were requested on reading level, interest level of the work, effectiveness of the unit in assisting in goal achievement and usefulness of the work. If students found the work useful, they were asked to specify what behavior changes it helped produce. Finally, students were asked if they would recommend that other seventh graders receive the units and to list their criticisms of the units and suggestions for improving them.

The final two instruments used at the junior high school level gathered the reactions of parents and teachers to the units. The Parent Reaction Survey asked parents if they were aware that their child was working on units dealing with his personal and social behavior, if they felt that the goals of the units were significant ones for junior high school students to achieve, if they agreed that it was appropriate for students to receive help in school to achieve the goals of the unit, and if they had noticed any changes in the behavior of their child that might have resulted from his experiences in the program. If a behavior change had been noted, parents were asked to describe it. A space was provided for any additional comments they wished to make.

The Parent Reaction Survey was given to experimental students attending Poston Junior High School for delivery to their parents quite a while after these students had completed the program. Because of poor follow-up less than 4% were returned. The results were likely to be quite biased and were not tabulated. The problem was corrected during the Powell field-test and about half of the parents completed the survey. A version translated into Spanish was distributed when necessary.

The instrument teachers used to react to the units asked for their opinions on the effectiveness of the units in helping their students achieve the units'

goals; the usefulness of the units to students (if the units were considered useful, teachers were asked to describe the behaviors that they helped students change); and the quality of the units in terms of reading level, interest level and clarity of content. Teachers indicated their opinion of two recommendations: that other seventh grade students receive the units and that additional, similar units be developed. Teachers were asked to note any positive or negative unanticipated effects of the units they observed. Space was provided for their criticisms of the units and suggestions for improving them as well as any other comments they wished to make.

Analyses and Results

The Part I and Part II survey tests administered at Poston and Powell Junior High Schools were scored by hand. An answer key was used for the objective items and the criteria for achieving a right answer on open-ended questions were specified. Experimental and control groups were compared by the chi square technique, and when necessary by Fischer's Exact Probability Test. The number of students who showed growth on an objective (who failed to achieve the objective on the pretest and achieved it on the posttest) was compared to the number who showed no growth (who failed to achieve or achieved an objective on both tests or who achieved an objective on the pretest and failed to achieve it on the posttest). Achievement of an objective was demonstrated by a correct or acceptable answer to the question designed to test that objective or by a positive change in attitude or awareness that was measured by a test item. Results that would have occured by chance one time in twenty or less were considered significant.

Table VI-1 summarizes the results of the evaluation by objectives for the Part I and Part II field tests at Poston and Powell Junior High Schools.

Significant differences in growth between students at Poston who received the program and those who did not occurred on only four objectives, one objective for each unit. These objectives were more concerned with the acquisition of knowledge than the others. On objective 200.02, 37% of the experimental students experienced growth, 16% experienced growth on objective 304.02, 37% on 401.01, and 19% on 302.01. The magnitude of these percentages is difficult to interpret since data on the number of students for whom each objective was appropriate (who could have experienced growth on that objective) were not tallied separately.

TABLE VI-1

JUNIOR HIGH SCHOOL PROGRAM

ANALYSIS OF OBJECTIVES

	Poston Experimentals vs. Poston Controls	Powell Experimentals vs. Poston Controls
Orientation 200.00		
200.01	not significant	
200.02	$p < .001$	
200.03	not significant	
Someone to Talk To 304.00		
304.01	not significant	
304.02	$p < .05$	
304.03	not significant	
304.04	not significant	
304.05	not significant	
Emotions 401.00		
401.01	$p < .01$	$p < .001$
401.02	not significant	$p < .001$
401.03	Significant in favor of control students	not significant
401.04	not significant	$p < .01$
401.05	not significant	not significant
Love 302.00		
302.01	$p < .01$	$p < .001$
302.02	not significant	$p < .05$
302.03	not significant	$p < .001$

Significant differences in the numbers of experimental students at Powell and control students at Poston experiencing and not experiencing growth were attained on three of the five objectives of the unit "Emotions," and on all objectives of the unit "Love." The percentages of experimental students experiencing growth on each of these objectives are presented in Table VI-2. Once again these percentages are difficult to interpret for the reason described earlier.

TABLE VI-2

PERCENTAGES OF EXPERIMENTAL STUDENTS
EXPERIENCING GROWTH ON SIGNIFICANT OBJECTIVES

Objectives	Percentages
401.01	36%
401.02	70%
401.04	33%
302.01	20%
302.02	19%
302.03	42%

The results on the attitude section and the help inventory section of the Part I and Part II survey tests are included in Appendix C of this report. The actual statements to which students responded in the attitude and help inventory sections are included also. They too are difficult to interpret. The reader is encouraged to refer to the appendix frequently throughout the following discussion.

In analyzing the results on the attitude section of the survey test, we calculated the percentages of experimental and control students agreeing or disagreeing with each statement. Students strongly agreeing with a statement were considered to have agreed with it for purposes of the analysis. Those students strongly disagreeing were considered to have disagreed. The number of emphatic responses was generally much smaller than the number of corresponding "agrees" or "disagrees." The one striking and consistent exception to this statement was the relatively large percentage of both experimental and control students who strongly agreed that they would like to be better able to express love. Changes

from pretest to posttest in percentages of students in both groups who agreed or disagreed with each statement were also calculated. The resulting statistics were then examined for major trends. Data produced by the help inventory were handled in essentially the same way except that percentages and changes in percentages of yes and no responses were calculated. For the last question, the percentage of students who listed a response is indicated.

The trends produced when the attitude section of the Part I survey test was administered at Poston Junior High School fall into three main categories. The first observation is that on the pretest students expressed positive attitudes toward: (1) the goals of the units; (2) receiving help in school to achieve these goals; and (3) receiving this help despite the embarrassment it might cause. The students split fairly evenly on the issue of whether help received in school to achieve the goals of the units would, in fact, cause them embarrassment. Slightly more experimental students than controls expressed positive attitudes. The second observation is that the changes in the percentages of students agreeing or disagreeing with attitude statements that occurred between the pretest and posttest were usually small and in a direction opposite to that which would have been expected if the units were affecting attitudes positively. These negative changes were somewhat larger for control students, however. The final observation is that larger percentages of experimental than control students expressed agreement with the goals of the units on both the pretest and the posttest. The same is true in regard to their willingness to receive help in school to achieve the units' goals and to receive this help despite the embarrassment it might cause. A smaller percentage of experimental than control students indicated on both the pretest and posttest that receiving this help would cause them embarrassment.

Four types of trends were observed in the data of the attitude section of the Part II survey test administered at Poston. First, large percentages of experimental students indicated positive attitudes toward the goals of the units "Emotions" and "Love" and toward receiving help in school to achieve these goals despite the embarrassment this might cause.

Second, changes in percentages for both experimental and control students were small on all items except four for the experimental group. The percentage of experimental students who agreed they would like help in school to learn how to get in touch with their emotions and to learn how their emotions affect their behaviors increased substantially. A relatively large increase in the percentage

of experimental students who would be embarrassed by help in school to get in touch with their emotions and to learn how their emotions affect how people feel about them was also observed.

Third, although the changes in percentages for experimental and control students were both small, for experimental students they were usually in a direction that would have been expected if the units were affecting attitudes positively. Changes for control students appeared to be random.

Finally, larger percentages of experimental than control students expressed agreement with the goals of the units on both the pretest and the posttest. The same is true in regard to their willingness to receive help in school to achieve the units' goals and to receive this help despite the embarrassment it might cause. On the pretest, a larger percentage of experimental than control students agreed that receiving help in school to achieve the units' goals would cause them embarrassment. The reverse was true on the posttest. Apparently, relatively more control students than experimentals developed an attitude of embarrassment toward help received in school over the period of time during which the field test was conducted.

Once again, four types of trends were observed in the data of the attitude section of the Part II survey test administered at Powell Junior High School. First, eighty percent or more of the experimental students expressed agreement with each goal on both the pretest and posttest. These percentages were greater than were obtained for either Poston experimentals or controls. No real trends were observed in the changes in the Powell data from the pretest to the posttest.

Second, not as large percentages of Powell students agreed that they would like to receive help in school to reach these goals, although usually more than half the students agreed with these statements on both the pretest and the posttest and increases in percentages of "agreeing" experimental students occurred on three of the four statements. Percentages of Powell students desiring help were always larger on both the pretest and posttest than the percentages of Poston experimentals or controls who desired help.

Third, Powell experimental students were fairly evenly divided on the issue of whether receiving help in school to achieve the units' goals would be embarrassing to them. These percentages were not unlike those among Poston control students. The percentages of Powell experimental students who agreed that such help would be embarrassing did decline from the pretest to the posttest.

Finally, in nearly every case on both the pretest and the posttest over 75% of the Powell students agreed they would be willing to receive help in school to achieve each of the units' goals despite the embarrassment this help might cause. On both the pretest and the posttest greater percentages of Powell experimental students than Poston control students expressed this willingness. On three of the four statements, however, the percentage of Powell experimental students expressing willingness declined slightly from pretest to posttest.

The results on the help inventory sections of the Part I and Part II survey tests administered at Poston Junior High School were so similar that they will be discussed together. On most pretest items, similar percentages of experimental and control students indicated they had recently received assistance to achieve the four units' goals. These percentages were small, however only one of sixteen was over 50%. The percentages of experimental students who indicated they had received help to achieve the units' goals consistently increased on the posttest, while percentages of control students consistently decreased. The percentages of both experimental and control students who indicated that the help they received helped them change and who described a resulting behavior change decreased from pretest to posttest in three of four cases. The percentage of experimental students did increase on these two variables for Part II.

The results of the help inventory sections of the Part II survey test administered at Powell Junior High School were more favorable than were those for Poston. The percentages of Powell experimental and Poston control students who reported on the pretest that they had recently received help to achieve the goals of the units "Emotions" and "Love" were roughly equivalent. Relatively large increases in these percentages occurred from pretest to posttest for the Powell experimental students. The percentages of students who reported on the posttest that they had received help ranged from 65% to 76%. These percentages appear quite large when compared to those of the Poston experimentals and controls. Increases in

percentages from pretest to posttest of a smaller magnitude occurred in the percentages of students who reported that the help they received had assisted them to change and who described a behavior change. These increases are similar in size to those that occurred at Poston, but the percentages of Powell students responding favorably on these variables on the posttest was somewhat greater than the corresponding percentages for Poston experimentals.

Results on the Student Reaction Sheet (SRS) administered at Poston Junior High School to experimental students after they had completed Part I and Part II of the program were described by percentages of students agreeing (and strongly agreeing) or disagreeing (and strongly disagreeing) with statements relating to the activities included in the units and percentages of students choosing each alternative item to complete general statements about the units. Criticisms and suggestions for improving the units were categorized. The SRS was not administered at Powell Junior High School.

On the SRS for Part I, over 75% of the students agreed that the role playing and needs assessment activities were interesting and helped them learn something important. Buzz groups were considered interesting by 76% of the students, but only 68% thought they contributed to important learning. Completing the self inventories in the "Orientation" unit was considered interesting by only 55% of the students, but 70% agreed that the activity helped them learn something important. Sixty-five percent of the students did not mind if their completed self inventories were filed in the counselor's office. Nearly 80% of the students considered that the hypothetical problems included in the unit "Someone to Talk To" were realistic and 60% disagreed that talking to a significant other about a problem was a waste of time.

The reading level of the Part I units was considered about right by about half the students. Only 7% considered "Orientation" hard or too hard, and only 3% held a similar opinion of "Someone to Talk To." The units were also interesting to students. Over 70% found each very interesting or fairly interesting.

Fifty-nine percent of the students thought the "Orientation" unit helped them understand themselves better or much better. The unit "Someone to Talk To" helped 64% of the students to be better or much better able to choose and contact someone when they experienced personal problems. Sixty-two and sixty-six percent of the students thought the work in the units was useful or very useful

to them and 47% responded when asked to describe a behavior they changed to illustrate how the units had been helpful.

About a third of the students who participated in the Poston field test listed criticisms of or suggestions for improving the "Orientation" unit and about 30% commented on "Someone to Talk To." More than a third of the statements about "Orientation" were positive. Slightly less than a third of those who commented felt the unit was too personal. About a quarter of the responses indicated that students found the unit boring or too easy, or they contained suggestions for improving it by adding pictures and activities such as plays, and films, or by reducing the amount of writing that was required.

About 30% of the experimental students at Poston commented on the unit "Someone to Talk To." Two-thirds of these comments were positive indicating that students liked the unit, thought it was fun to do, or felt it was helpful to them. Only about 20% of those who commented did not like the unit or felt it was too personal. Ten percent of the responses included suggestions for improving the unit. Students would like more pictures, plays, and films to be included and wanted to spend more time working on the unit.

On the SRS for Part II, over 75% of the experimental students at Poston agreed that the improvisations, plays, stories, role playing, and speakers' presentations included in the units were interesting and helped them learn something important. The students were fairly evenly divided on the interest and benefit of finding pictures in magazines to illustrate emotions and describing these to the class, and of making collages of emotions.

Students found the reading level of the Part II units about right or easy for them. Only 1 - 2 % considered them hard. Fifty-two percent thought that reading "Emotions" was easy or too easy, and 57% responded this way regarding "Love."

Not as many students responded positively to statements regarding the effectiveness of the Part II units in helping students achieve unit goals. Two-thirds of the students indicated that "Emotions" helped them to better or much better get

in touch with their emotions and understand how their emotions affect their behavior and the way other people feel about them. Fifty-four percent found that "Love" helped them to be better or much better able to express love. Slightly over 60% found the units useful or very useful but only 19% listed a behavior change to specify how the units were useful to them.

Fewer students (only about 20% of those who participated in the field test) listed criticisms of the Part II units or suggestions for improving them and their comments were less positive than was the case for the Part I units. Only about 15% of those students who commented on the unit "Emotions" stated that they liked it or found it helpful. About a quarter of the comments indicated that students didn't like the unit or found it too personal, and another quarter indicated that the unit was boring. About a quarter of the comments suggested improving the unit by: (1) adding activities such as movies, plays and role playing; (2) increasing its realism; and (3) increasing the amount of time students have to work on it.

The most significant type of comment related to the unit "Love" suggests that students were not given adequate exposure to it. Nearly 30% of the students who commented felt the unit was too short. Slightly over 10% of the students who commented indicated that they liked the unit or felt it was helpful to them, while about 15% found it too personal. These students indicated that they preferred to express love in their own way or that they considered some questions should not be asked. About a quarter of the students found the unit boring or made the same types of suggestions for improving it that were made for the unit "Emotions."

The results of the Parent Reaction Survey distributed to the families of students at Powell Junior High School were analyzed by computing the percentages of respondents who answered "yes" or "no" to questions with these alternatives and by categorizing their responses to open-ended questions. The results indicate that parents were not well informed about the guidance program in which their children participated. Only 38% of the respondents were aware their child was working on special guidance units, and only 24% were familiar with their content. (The questionaire referred to all units implemented at the junior high school level. It was not restricted to the units included in the field test. Data for all units are reported.)

The parents did express overwhelming agreement that the goals of the units were important for junior high school students to achieve. Percentages of agreement ranged from 96% to 99%. Parents also agreed that it is appropriate for students to receive help in school to achieve these goals. In each case, the percentage of agreeing parents was 90 or above. The greatest agreement was associated with the goals of improving study and decision-making skills. The lowest percentage agreed that help in school to achieve the goal "to have someone to talk to when personal problems arise" was appropriate.

When asked if they had noticed a change in their child's behavior that might have resulted from his working on the guidance units, 23% of the parents responded "Yes" and described what they had observed. About two-thirds of these descriptions indicated that the students had achieved a better self-image and more control of their emotions. The other comments suggested that students' school work had improved.

About a quarter of the parents made additional comments on the guidance units. Of these responses, nearly 30% were general, favorable statements about the program, another 20% were mainly favorable but qualified, and a third of the comments indicated the parents would prefer that the school concentrate on basic subjects or that the responsibility for the personal and social development of the child should remain in the home. The remaining type of comment was a desire for more information on the program.

In analyzing the data of the teacher's evaluation of the junior high school program, we could not separate the responses of teachers who participated in the field test from those of teachers who taught less than the four units. Therefore, all appropriate data from ten teachers will be presented. These data were summarized by calculating the percentages of teachers who indicated each alternative response to sentence-completion items and by categorizing their responses to open-ended questions.

Teachers indicated that the units "Orientation," "Someone to Talk To," and "Emotions" helped their students achieve the goals of these units better or much better. The percentages of agreement were, respectively, 86%, 80%, and

100%. Fifty percent of the teachers reported that the unit "Love" helped their students to give and accept love better or much better. A quarter of them were undecided and the remaining 25% felt the units were not much help at all. Eighty percent of the teachers agreed that the units were useful to most of their students, 90% thought their students had found them interesting, and 80% expected their students would like to work on similar units in the future. Forty percent of the teachers felt that all other junior high students in their schools should work on similar units. The remaining 60% indicated that these units should be available to students who want and need to work on them. Forty percent of the teachers gave the units a general rating of "excellent - easy to read and understand; not confusing at all," 40% rated them "good," and 20% "fair."

When asked to elaborate on how the units were helpful to their students, 90% of the teachers replied. Two of the ten teachers stated that one activity (the I.A.L.A.C. story) produced a brief behavior change in their students. The remaining responses described general effects - an increased awareness of emotions and behavior, an increased willingness to talk about feelings, and an increased acceptance of self.

When asked to comment on the positive unanticipated effects of the units, nine teachers replied. The units were said to contribute to students' adjustment to seventh grade, and to help teachers come to know their students more rapidly. Students appeared to eagerly accept the subject matter of the units and discuss it on a mature level. Communication between students and between teacher and student was enhanced. One teacher applied the concepts presented in the units to resolve classroom interaction problems, and another found parents to be interested and supportive.

Six teachers listed negative unanticipated effects. Two indicated that some students did not take the work seriously, and one of the two observed that students viewed the units as an escape from the social studies curriculum. (This teacher is considering the implications of that observation for classroom work.) Another teacher noticed an initial resistance to the personal nature of the units which dissipated as students progressed through the program. The lengthy presentation and repetition of concepts made progress tedious for one teacher using the units under a single period schedule. One teacher noted that a number of parents questioned the units quite seriously.

One teacher had no criticisms of the units or suggestions for improving them. The units were considered repetitious by three teachers, and three others felt that some of the vocabulary, materials, and activities were too elementary to be appropriate for seventh-graders. Two teachers indicated that the role-playing activities were too advanced for this age group. It was suggested that the materials lists and recommended time allocations be revised and that some activities should be eliminated and others developed to a greater extent. One experienced teacher noted that, while the detailed structure might be valuable for a beginner, he had used the units only as guidelines and had improvised as he taught them.

The final question on the evaluation form solicited teachers' comments on their feelings and their students' feelings about the units. Most of the responses were very positive. The units helped teachers to understand their students, and gave the students an opportunity to see their teacher more as a person than an instructor. The concern was expressed, though, that the units were too long and time-consuming. Students became bored and teachers were pressured to cover their regular curriculum. One teacher noted that students complained about taking the pre- and posttests.

Discussion and Conclusions

Since significant differences in growth occurred on only one objective for each of the units ("Orientation," "Someone to Talk To," "Emotions," and "Love") at Poston Junior High School, it cannot be stated that the program at Poston effectively helped students achieve any of its goals. It is likely that this result is due less to deficiencies in the units than to the recognized weaknesses in their implementation noted earlier. The results of the Part II field test at Powell Junior High School support this conclusion.

It cannot be stated unequivocally that the unit "Emotions" effectively helped students at Powell achieve its goal since significant differences in growth were produced on only 60% of the units' objectives. This unit is likely to require revisions, but it seems very promising given the results of the Powell

field test. Revision efforts should be directed especially at the two objectives on which significant differences were not produced.

Significant differences in growth were obtained at Powell on all of the objectives of the unit "Love" and it can be considered to have helped students achieve its goal.

The three types of trends observed in the data produced by the administration of the attitude section of the Part I survey test at Poston Junior High School indicate that it is unlikely that the units "Orientation" and "Someone to Talk To" produced a significant effect on students' attitudes as measured by this instrument.

The trends observed in the data produced by the administration of the attitude section of the Part II survey test at Poston Junior High School indicate that although the treatment was weak, the units "Emotions" and "Love" may have had some slight positive effects related to students agreement with the goals of the units. The units may also have reduced experimental students' embarrassment over receiving help in school to achieve these goals.

It is difficult to draw conclusions from the trends observed in the data produced by the administration of the attitude section of the Part II survey test at Powell Junior High School. Part of this difficulty derives from the differences on all items between experimental and control students. Comparable percentages of students agreeing to statements do not exist. It may be that the units "Emotions" and "Love" increased Powell students' desire to receive help in school to achieve the goals of the units. This conclusion is confounded, however, by the decrease in willingness to receive this help despite the embarrassment it might produce. This contradiction might be explained by the observation that embarrassment at receiving help also declined. The two positive possible effects can be considered to outweigh the negative one, so that in general it can be said that Part II of the program at Powell enhanced students' attitudes in a small way.

Despite the difficulties with the treatment at Poston that were described earlier, it appears from the results on the help inventory section of the Part II survey test that the units have helped some experimental students achieve the units goals and that this help resulted in increased reports of behavior change for the units "Emotions" and "Love."

The assumption that the program at Powell was more effective than that at Poston is sustained by the results of the help inventory section of the Part II survey test. These data also support the conclusion that the program did help students achieve the goals of the units "Emotions" and "Love."

Conclusions from the data obtained at Poston Junior High School from the administration of the Student Reaction Sheets for the Part I and Part II units may be drawn by establishing the criterion that 75% of the responding students must express agreement. Figure VI-2 summarizes the resulting conclusions. In general, students found the specific activities included in the units interesting and useful in helping them achieve the units' objectives. The units themselves were considered interesting, but they did not meet the criterion established to indicate effectiveness in helping students meet unit goals or change their behavior. The reading level of the units was easy or about right for experimental students.

The comments of those students who responded to the open-ended question on the SRS indicate that these individuals would prefer the units to be less personal and more stimulating. They consistently requested that more audio-visual materials and activities requiring participation rather than reading, writing and contemplation be included. Students also noted that they would like to spend more time on the units.

On the whole, it appears that the program at Poston Junior High School was well received by students and was considered appropriate by them. Perhaps the suggestions they made for improving the units would enhance the units' effectiveness in helping students achieve their goals and change their behavior.

The results of the Parent Reaction Survey completed by the families of students at Powell Junior High School unquestionably support the conclusion that parents agree with the goals of the junior high school guidance program and consider it appropriate for their children to receive help in school to achieve these goals. Although it is evident that parents lacked information about the program at the time the survey was conducted, it is quite likely that the fact they were asked for their opinions aroused interest in the program and provided information on it.

FIGURE VI-2

JUNIOR HIGH SCHOOL PROGRAM

CONCLUSIONS DRAWN FROM SRS DATA

75% AGREEMENT CRITERION

Topic	Conclusion	Part I	Part II
Activities included in units	Interesting?	Yes - except inventories	Yes - except pictures and collages relating to emotions
	Useful?	Yes - except buzz groups and talking to a significant other	Yes - except items listed above
Units in General	Interesting?	Yes	Yes
	Useful?	No	No
	Produce Behavior Change?	No	No
Reading Level of Units	About Right or Easy?	Yes	Yes

One might predict that the bulk of the responses to the open-ended question on the Parent Reaction Survey would be written by parents who were critical of the guidance program. This was not the case; the majority of these comments were interpreted as at least somewhat supportive of the program. The concerns parents expressed regarding the teaching of basic school subjects and their prerogatives in directing the development of their children are understandable. With more information on the guidance program, they might understand that these efforts do not interfere with parents' goals for their children.

The results obtained from the teacher's evaluation of the junior high school program indicate that most of those implementing it received the units very favorably on the whole. Most of the teachers considered three of the four units ("Orientation," "Someone to Talk To," and "Emotions") effective in helping students achieve the unit's goal and felt all units were generally valuable and interesting to students. According to the teachers, the units can be improved by deleting repetitious material and adjusting vocabulary, materials and activities to be more appropriate for the target population.

General conclusions and recommendations related to the four units of the junior high school program dealing with personal and social behaviors and the 1973-74 field test of them were presented in Section II of this report.

VII. ASSESSMENT OF STUDENT OUTCOMES - SENIOR HIGH SCHOOL LEVEL

Treatment

Six units comprising a program to facilitate students' educational and vocational development were field-tested at the senior high school level. The goals and performance objectives of these units are presented in Figure VII-I.

Approximately 600 tenth, eleventh, and twelfth graders at Mesa High School received the units, but the field-test results are based on the achievements of nearly 200 students who completed both pre- and posttesting in the second semester. The units were implemented as part of an 18 week elective course titled "English and Careers" which was open to any student in the high school. The units were integrated with the regular curriculum which consisted of such activities as: setting up an office, writing letters to request occupational information, practicing job interviews, writing a research paper on an occupation and preparing book reports to build vocabulary.

The units were taught by four teachers who were trained by the counselors at Mesa High School. They worked very closely with teachers during the first semester, often teaching the units so that teachers could observe. The counselors considered that the treatment during the second semester was somewhat weaker than that of the first because they could not be as deeply involved. The treatment was also hampered because the unit "Personal Characteristics" was not taught due to printing problems.

Almost forty students drawn from a tenth-grade safety education course, an eleventh-grade American history course, and a twelfth-grade home and family course served as the control group for the field test. Control students at three grade levels were necessary to match the experimental students who enrolled in the non-graded English and careers classes. A wide range of ability levels was represented among students in both the experimental and control groups but no rigorous attempt at matching subjects on this variable was made.

Figure VII-I

GOALS AND OBJECTIVES OF SENIOR HIGH SCHOOL UNITS

PLANNING, CHOICE - NOT CHANCE

202:00
Identify important educational and vocational alternatives and the points in time when it is probably best to consider them; and recognize that the selection of some alternatives will open a maximum of doors.

202:01
When directed, the learner will identify three reasons why it is important for a person to consider several educational and vocational alternatives in the process of setting long-range goals.

202:02
When directed, the learner will identify at least one result of a decision made at a certain point in time.

202:03
When directed, the learner will identify one educational-vocational decision which should be made by every high school student and the point in time to make that decision.

202:04
When directed, the learner will give two examples of vocational opportunities which will be opened, and two examples of vocational opportunities which will be closed to any student as a result of considering and acting on alternatives.

202:05
When directed, the learner will become aware of the development of his post-graduation goal, and review his experience to date as they relate to that goal.

TRENDS

205:00
Be familiar with some ways in which the availability and/or desirability of vocational opportunities are being influenced by trends resulting from social, economic, and technological factors.

205:01
When directed, the learner will identify the correct definitions of the following terms: Trends, Social Factors, Economic Factors, Technological Factors.

205:02
(205:03 in Teacher-Counselor Supplement) Given examples of factors which are affecting job opportunities the learner will, when directed, identify whether they are economic, social, or technological factors.

205:03
(205:02 in Teacher-Counselor Supplement) Given examples of Social, Economic, and Technological factors the learner will identify their impact upon job opportunities in particular occupational areas.

GOALS AND OBJECTIVES OF SENIOR HIGH SCHOOL UNITS

INFORMATION EXPLOSION

206:00
The learner will be able to locate, use, and evaluate major sources of vocational and educational material.

206:01
When directed, the learner will identify five important sources of vocational and educational material.

206:02
When directed, the learner will use five information sources and find particular items of information.

206:03
When directed, the learner will evaluate the information given in the sources according to reliability, relevance, and bias.

PERSONAL CHARACTERISTICS

201 B
The learner will understand his abilities and interests, and other characteristics to facilitate a more realistic career exploration.

Given a list of ten statements, each describing a different personal characteristic, the learner will indicate in every case which type of personal characteristic is described: an ability, an interest, a value, a physical trait, or a personal social behavior.

WHO AM I

201:00 A
The learner will understand his abilities and interests, and other characteristics to facilitate a more realistic career exploration.

201:01
The learner will identify three major types of sources of information about himself that can affect his choices of school and vocational goals. Also, the learner will recognize one principal difference between the purpose of a score a student makes on a test in one of his classes and the purpose of a score he achieves on a personal assessment instrument.

201:02
The learner will show that he has collected and summarized in a personal log, information about himself in each of the five areas of personal characteristics. Given his student log, the learner will evaluate information about himself in each of the five areas of personal characteristics.

201:03
Given a counseling situation, the learner will describe his personal assessment and discuss it with a counselor and his parents.

GOALS AND OBJECTIVES OF SENIOR HIGH SCHOOL UNITS

Exploring Goals

207:00
The learner will explore in depth three Long-Range Goals (LRG's) in relation to decisions and choice points in order to select a primary and secondary long-range vocational goal.

207:01
When directed, the learner will compare his six scores on the Developed Abilities performance instrument with other given scores, and identify three long-range goals which his abilities indicate he might want to explore in more depth.

207:02
When directed, the learner will identify the Long-Range Goals that include occupations whose work activities he is most likely to find interesting.

207:03
When directed, the learner will use the Long-Range Goals which he has identified to pick the three Long-Range Goals he will explore in more depth.

207:04
When directed, the learner will orally report to an instructor that he has completed all of the Exploration Units related to the three Long-Range Goals he picked to explore in more depth.

Evaluation

Five instruments were used to evaluate the effects of the program at the senior high school level. The first was a survey test which covered all the units listed in Figure VII-I. This test, designed to be administered in one classroom period, usually contained one multiple-choice item per objective. One item on the test required library work that was to be done during students' study halls or free time. This test was administered both to experimental and control students the last week in January, 1974 before experimental students participated in program activities, and the first week, in May, 1974 after they completed them.

The second evaluation instrument was called the Student Attitude Survey (SAS). It was administered to the same students at the same times as the survey test. To complete the SAS, students marked boxes to indicate whether they "strongly agreed", "agreed", "disagreed", or "strongly disagreed" with statements which reflected the goals of the units of the program or which expressed a desire to receive assistance in school to attain these goals.

The Student Reaction Sheet (SRS), the third evaluation instrument, was filled out by experimental students after they had participated in the program. Sentence completion items assessed whether students felt the reading level of the units was appropriate, and whether the work in the units was interesting and valuable. If a student found a unit helpful, he was asked to describe a behavior he changed as a result of working on the unit. Students indicated whether they would recommend that other students work on the units. A space was provided for them to record their criticisms of the units and suggestions for improving them.

The Parent Reaction Survey was sent home with students. Over one fifth of the parents completed them. They indicated whether they were aware that their child was working on units dealing with his educational and vocational development, whether they agreed that the goals of these units were significant ones for senior high school students to achieve, and whether they agreed that it is appropriate for students to receive help in school to achieve the goals of the units. Parents were asked if they had noticed a change in the behavior of their child that might be the result of his work on the units and if so

to describe the change. The last section of the Parent Reaction Survey provided respondents with an opportunity to comment on the units.

The final evaluation instrument employed at the senior high school level was distributed to those teachers who used the units in their classrooms. All these teachers completed and returned the form. Through multiple-choice questions teachers expressed their opinion of the degree of effectiveness of the units in helping their students achieve the units' goals, the usefulness to the students of the units, and the quality of the units in terms of reading level, interest level and clarity of content. If teachers felt the units were useful to their students, they were asked to describe the specific behaviors students changed as a result of working on the units. Teachers indicated whether they would recommend that other students receive the units and whether they would recommend that other similar units be developed. Teachers reported any positive and negative unanticipated effects of implementing the units they observed, and noted any criticisms they had of the units and their suggestions for improving them. The teacher evaluation form contained a section for any other comments the teachers wished to make.

Analyses and Results

The survey test used to evaluate students' attainment of the objectives of the senior high school program was machine scored. Since very few students turned in answers to the item that required library work, results on the objective it assessed were not analyzed. Meaningful comparisons could not be made with so few data. Experimental and control data were compared by the chi square technique. The number of students who showed growth on an objective (who failed to achieve an objective on the pretest and achieved it on the posttest) was compared to the number who showed no growth (who failed to achieve or achieved an objective on both tests or who achieved an objective on the pretest and failed to achieve it on the posttest). Achievement of an objective was demonstrated by a correct answer to the question designed to test that objective or by an indication that a desired outcome or activity had been accomplished. Results that would have occurred by chance one time in twenty or less were considered significant.

Table VII-1 summarizes the results of the evaluation by objectives for the field test of the senior high school program at Mesa High School.

TABLE VII-1

SENIOR HIGH SCHOOL PROGRAM
ANALYSIS OF OBJECTIVES

Planning, Choice-Not Chance 202:00		Personal Characteristics	not implemented
202:01	not significant	Who Am I 201:00	
202:02	not significant		
202:03	not significant	201:01	not significant
202:04	not significant	201:02	$p < .001$
Trends 205:00		201:03	$p < .05$
205:01	$p < .02$	Exploring Goals 207:00	
205:02	not significant	207:01	$p < .01$
205:03	not significant	207:02	
Information Explosion 206:00		207:03	
206:01	not significant	207:04	$p < .02$
206:02	not computed		
206:03	not significant		

Significant differences in growth between experimental and control students occurred on objectives of three of the six units. One of three objectives of the unit "Trends" was significant, two of three objectives of the unit "Who Am I" were significant, and significant differences of all objectives of "Exploring Goals" were achieved.

The percentages of experimental students who experienced growth on each significant objective are shown in Table VII-2. The magnitude of these percentages is difficult to interpret since data on the number of students for whom each objective was appropriate (who could have experienced growth on that objective) were not tabulated separately.

TABLE VII-2

PERCENTAGE OF EXPERIMENTAL STUDENTS
EXPERIENCING GROWTH ON SIGNIFICANT OBJECTIVES

Objectives	Percentages
205:01	31%
201:02	25%
201:03	24%
207:01-207:03	46%
207:04	43%

Students' responses on the Student Attitude Survey were summarized by calculating the percentages of experimental and control students who agreed or disagreed with each statement. Students strongly agreeing with a statement were considered to have agreed with it; those strongly disagreeing, to have disagreed. Changes in percentages from pretest to posttest of students in both groups who agreed or disagreed with each statement were also calculated. The data were then examined for major trends.

Large percentages of both experimental and control students agreed with the statements representing the goals of the units of the senior high school program on both the pretest and posttest. Percentages of experimental students expressing agreement were in the 80's or low 90's for each goal. Very small changes (1-2%) in percentages were observed from pretest to posttest. In all but one case, these changes were negative. The percentages of control students agreeing with the units' goals were not quite as large. They ranged from 65% to 96%. The changes in percentages from pretest to posttest were somewhat larger, but still small. All but one were under 10%. With one exception, these changes were negative.

On both the pretest and posttest large percentages of experimental and control students also agreed that they wanted help in school to achieve the goals of the units. In every case, the percentages of experimentals were over 75%. Two-thirds of the control percentages were over 75%. The percentages of experimental students agreeing were usually slightly larger than those for control students on both the pretest and posttest. The percentages of both experimental

and control students who wanted help in school to achieve the goals were always lower than were the percentages of students who agreed with the goals. Changes from pretest to posttest in percentages of experimental students who agreed they wanted help in school to achieve the goals of the units were quite small (1-3%) and evenly divided between positive and negative. Changes for control students were slightly larger than those for experimental students, but all were below 10%. Two-thirds of these changes were positive.

Results on the Student Reaction Sheet (SRS) administered to experimental students at Mesa High School after they had participated in the field test of the senior high school program were described by the percentages of students who chose each alternative item to complete statements about the units. Criticisms and suggestions for improving the units were categorized.

Slightly over half of the students found the reading level of the units about right for them, while almost 40% considered it easy or too easy. Students were split fairly evenly in their opinions of how interesting the work in the units was. Forty-four percent found it very interesting or fairly interesting, 19% were neutral - the work for them was neither interesting or boring. Thirty-seven percent found part or most of the work in the units boring. However, 61% considered the same work useful or very useful to them, 15% were undecided on this question, and 24% felt the time they spent working on the units was wasted or probably wasted. When asked if they would recommend that other students work on units like these, 70% of the experimental students answered "yes."

Three questions on the SRS asked students' opinions on how helpful the program had been in assisting them to achieve three of its general goals. Nearly 70% indicated that the units had helped them understand the world of work better or much better, 61% felt the units had helped them know their personal characteristics better or much better, and 57% considered that they had been helped to better or much better understand how to use information on their personal characteristics and on the world of work to select a long-range goal. The percentages of students who were undecided on these issues were 20%, 21% and 23% respectively. The percentages of students who felt they had not been helped or not helped very much were about the same as those who were undecided.

Those students who thought that the units were helpful were asked to specify how they had been helped in terms of the behaviors they had changed. About 40% of the students who responded to the SRS answered this question. Only 7% of the comments were negative. Three students stated that the units were not helpful, two found them confusing, and one felt that they didn't apply to his specific interests. Three of the comments relating to how the units helped students change their behaviors were positive but did not describe specific behaviors.

Most of the positive comments that described how the units helped students change their behaviors fell into three general categories. Seven students indicated that they had been helped to choose or consider choosing long-range goals. Thirteen students stated that they had come to understand the nature of occupations and the requirements for entering various jobs. Ten felt they had been helped to analyze their personal characteristics, especially their interests and abilities.

About a quarter of the students who responded to the SRS criticized the units or made suggestions for improving them. Two students suggested eliminating the units altogether and three considered them boring, repetitious, or too easy. Two students wanted more group work to be included, while three thought the units should be more individualized. More individual help was requested by two students. Three students criticized their teacher for not understanding the units and allowing the class to "goof off." Two students requested a better orientation to the units before they began working on them. Three students suggested changes in the format and presentation of the units. One thought there were too many books and papers, another wanted more films and less writing, and the third asked for breaks between the units. Three other students suggested changes in the content of the program. One requested a unit on summer jobs and help in finding a job, another thought that some activities in the unit should be eliminated, and the third wanted to work on more units. The last three comments related to the amount of time available to students to work on the units. One student requested more time, another suggested that less time be spent on certain activities, and the third felt the units should be shorter.

The results of the Parent Reaction Survey distributed to the families of students at Mesa High School who participated in the field test were analyzed by computing the percentages of respondents who answered "yes" or "no" to questions with these alternatives and by categorizing their responses to open-ended questions. The results indicated that close to three-quarters of the parents who responded

were aware that their child was working on units dealing with his educational and vocational development.

Parents firmly supported the goals of the senior high school program. The percentages who indicated that these were significant goals for tenth grade students ranged from 89% to 97%. Two goals had 96% agreement and two had 93%. The lowest percentage of parents agreed with the goal "to select a primary and secondary long-range goal."

Parents also thought it was appropriate for students to receive help in school to achieve the goals of the senior high school program. Three of these percentages were above 95% and three were over 90%. Apparently, most parents agree with the aims of the program.

Thirty-two percent of the parents who responded to the survey had noticed a change in the behavior of their child that might have resulted from his work on the units of the senior high school program, but only slightly less than a quarter of them specified the change that they had observed. Four parents indicated that their child had selected goals for himself and three stated he had begun working to achieve his goals. Four parents felt that their child had shown more awareness of himself and others, and two stated that he had gained self-confidence. One parent believed his child had learned about job opportunities and requirements, and two observed that their son or daughter had become more interested in his or her future. One parent noted that his child did not like working on the units.

The last question on the Parent Reaction Survey solicited comments on the units. Again, slightly less than a quarter of the parents who returned the survey instrument responded. Five of them felt that the units had been helpful to their child in a general way. Three suggested that the program itself be more responsive to the individual needs of their child - that more personal guidance be provided, or that their child be given the opportunity to learn more about his specific occupational goal. Two parents stated that their child had been assisted in selecting career goals, but one felt that tenth-grade students were, in most cases, too young for the content of the program. One parent suggested that the high school guidance program should be offered as a separate class rather as part of the English curriculum. Another felt the program should be limited to providing information, not guidance.

The data produced by the teachers' evaluation of the senior high school program were summarized by calculating the percentages of teachers who indicated each alternative response to sentence-completion items and by categorizing their responses to open-ended questions.

Teachers agreed that the senior high school units had helped their students to achieve the goals of these units better or much better. For every unit or goal, at least three of the four teachers expressed this opinion. One teacher was undecided as to whether the unit "Planning, Choice - Not Chance" had helped his students to identify educational and vocational alternatives and know when it is best to consider them. He felt this unit had not been much help at all in assisting them to choose educational and vocational alternatives that will open a maximum number of doors. Another teacher was undecided as to whether the unit "Exploring Goals" had helped students to select a primary and secondary long-range goal.

All teachers indicated that working on the units was useful to most of their students - that it helped them move toward goals that they wanted. Teachers were also in agreement that, in general, the units were of good quality. They felt that most students had little trouble reading and understanding them, although they were a little confusing at times. All teachers thought that other tenth-grade students should work on similar units if they need and want them.

The teachers were divided in their opinions of whether students found the units interesting and would like to work on more units related to their educational and vocational development in the future. Two of the teachers stated that their students found the units neither interesting nor boring, one thought students found them very interesting and one felt they were a little bit interesting to students. Half the teachers reponded "yes" and half "no" when asked if they thought students would like to work on similar units.

When teachers were asked to specify how the units had been helpful to their students, they all agreed that the units had helped students learn how to look for career information, and had made them more aware of the need to make career decisions. One teacher stated that some students had actually decided to pursue a specific career.

The positive unanticipated effects of the units that teachers listed were the: (1) increased ability of students to work with others; (2) increased student ability and interest in career planning; and (3) positive response of parents. The negative effects they listed were the reluctance of students to ask questions when they became confused by not reading carefully, the lack of participation of slow students, and students' dislike of the units. Slower students especially did not want to work in workbooks.

Teachers criticized the units for being confusing, and too formal and machine-like. The language they contained was considered to be too difficult for slow students. It was suggested that the goal of each unit be stated at the end rather than the beginning of the unit, and that, whenever possible, a unit be presented in one booklet.

Three teachers expressed final comments about the units. One teacher felt they should include more activities and alternative materials so students could choose what they would work on. Another teacher indicated that some of her students liked the units and others considered them busywork. She observed that some students were frustrated by the units because they wanted to learn about specific careers only, rather than broader issues like planning and trends. The third teacher believed that two units, "Information Explosion" and "Who Am I" had some success with her students, but that they considered the other units to be busywork.

Discussion and Conclusions

Significant differences in growth between experimental and control students in the field test of the senior high school program were not achieved on any of the objectives of three of the program's six units. This situation is likely to have resulted from the weak or inappropriate treatment associated with two of the units, and from an inadequately implemented evaluation of the third.

Students who participated in the field test did not have the opportunity to work on the unit "Personal Characteristics." Significant differences on its objective were not expected. The main instructional content of the unit "Planning, Choice - Not Chance" was delivered by having students play the "Life Careers Game." While it was reported that students seemed to enjoy this activity and benefit from it, it did not help many students increase in their ability to answer the questions that

were included in the survey test to assess the objectives of the unit. It is possible that the game did not provide instruction that contributed to students' achievement of the objectives, or that students were unable to apply what they had learned in answering the questions on the survey test. It is also conceivable that the test items were inadequate measures of students' learning, but this is less likely. Both the high school division chairman and the test developer held the opinion that the items were appropriate before the test was used. In any case, the unit is being revised.

The test item that assessed the second objective of the unit "Information Explosion" was not completed by enough students to permit a meaningful evaluation of this objective. The item required students to find specific vocational and educational information outside of class. Very few experimental or control students turned in the results of their efforts for both the pre- and posttests. Therefore, it cannot be determined whether or not the unit helped them acquire the skill represented by the objective. Hopefully, steps will be taken during the next field test of "Information Explosion" to correct the problem.

The effectiveness of the remaining three units of the senior high school program varied. The unit "Trends" cannot be considered effective in helping students achieve its goal. Significant differences in growth were observed on only one of its three objectives. Apparently the unit helped students learn to define terms but not to recognize or understand the concepts these terms represent.

The unit "Who Am I" was more successful. Two of its three objectives were significant. Students did not demonstrate significant learning related to the cognitive outcome of the first objective, but they did report significant growth in the self-assessment activities represented by the other two objectives of the unit. These objectives are more directly related to the unit's goal than the first, even though they are more concerned with processes than outcomes. On the whole, the unit may be considered effective in helping students achieve its goal.

The objectives of the unit "Exploring Goals" were assessed by two items which asked students to report whether they had experienced the outcomes of the processes represented by the objectives. Significant differences in growth were observed on both items. The unit may be considered effective in helping students engage in the activity represented by its goal.

The results of analyzing the data obtained by the administration of the senior high school Student Attitude Survey indicate that the field-tested units were on target. Students agree with the goals of these units and want help in school to achieve these goals. No real effects of the program on students' attitudes were apparent from these data, however.

The results of analyzing the data produced by the Student Reaction Sheet indicate that most students (over 90%) found the reading level of the units in the senior high school program about right or easy and that over two-thirds of them would recommend that other students have the opportunity to work on the units. There are no other clear trends in the data. Students are split in their opinion of interest of the work. While more than half of the students found this work useful to them and helpful in assisting them to achieve the general goals of the units, the criterion of 75% of the experimental students expressing positive opinions related to these issues was not achieved. The three types of positive, open-ended comments related to how the units helped students are encouraging, but only about a third of students who responded to the SRS made them, and responses on the SRS were obtained from less than a third of the students who participated in the field test. These comments could present a biased picture of the opinions of all experimental students.

The contradictions in the suggestions students made for improving the units illustrate a problem encountered in the field test that has already been recognized. The units were not sufficiently individualized to be appropriate for the varying abilities of students who participated. The high school division chairman felt they did not include enough alternative resources for slow students nor provide enough challenge to stimulate bright students. He plans to try to resolve this problem as the units are revised.

The results of the Parent Reaction Survey administered to the families of students who participated in the field test of the senior high school program show that most parents who responded were fairly well informed about the program and that they supported its goals for their children and its efforts to help students achieve these goals in school. The effect of the program that parents reported most often was that their children had set career goals and had become concerned with their future. The parents' comments were usually supportive of the program although they suggested changes in details of it. Reliable conclusions cannot be drawn from the data produced by the Parent Reaction Survey because of the low response rate.

The four teachers who taught the senior high school units generally hold fairly favorable opinions of them. The results of the teachers' evaluation show that they consider the units to be of good quality and usually helpful or useful to students in learning how to locate career information and making them aware of career decisions. Some teachers indicated that their students' opinions of the units were not as positive, however. Teachers suggested improving the units' format,vocabulary and variety of activities, especially to benefit slow learners.

General conclusions and recommendations related to the six units of the senior high school program dealing with students' educational and vocational development and the 1973-74 field test of them were presented in Section II of this report.

APPENDIX A -

Instruments Used in the Assessment of Staff Product Objectes

Assessment of Mesa Staff Products

Staff Product Objectives and Rating Categories

Staff Product Objective 1: To produce an approved, written summary of all goal statements and student performance objectives for developmental career guidance, counseling, and placement programs at grades K, 1, 2, 7 and 10.

Rating Categories

Very Unacceptable - no such document exists and producing one has not been considered

Unacceptable - no such document exists, but a draft of one could be quickly prepared

Acceptable - a draft of such a document exists in a form appropriate for in-house circulation

Very Acceptable - such a document exists in a form appropriate for external dissemination

Staff Product Objective 2: To have a summary of all career guidance, counseling, and placement activities which are potentially effective for helping students achieve the measurable objectives specified in Staff Product Objective 1. These activities must assist each student to select and achieve both short and long-term goals and to find educational experiences which are functional to his career goals. Such activities should be organized into units (or packages) which outline: (i) desired student outcomes phrased as student performance objectives; (ii) the suggested activities and resources keyed to each objective; and (iii) objective-based evaluation procedures and tests which will both help students assess the extent to which they achieved their objectives and provide data for this project's accountability system.

Rating Categories

Very Unacceptable - Counselors have not considered how their activities relate to student objectives

Unacceptable - Counselors know of activities that may help students achieve specified measurable objectives

Acceptable - Potentially effective activities are summarized in the form of units. Each unit contains a statement of: (i) desired student outcomes phrased as student performance objectives; (ii) the suggested activities and resources keyed to each objective; and (iii) objective-based evaluation procedures and tests which will both help students assess the extent to which they achieved their objectives and provide data to determine project accountability

Very Acceptable - Acceptable units exist, and each activity in a unit can be clearly shown to assist each student to select and achieve both short and long-term goals and to find educational experiences which are functional to his career goals

Staff Product Objective 3: To have an approved, detailed description of the exact settings in which the guidance activities identified in Staff Product Objective 2 will be implemented with students in grades K, 1, 2, 7 and 10 in the demonstration schools.

Rating Categories

Very Unacceptable - no such document exists and producing one has not been considered
Unacceptable - no such document exists, but a draft of one could be quickly prepared
Acceptable - a draft of such a document exists in a form appropriate for in-house circulation
Very Acceptable - such a document exists in a form appropriate for external dissemination

Staff Product Objective 4: To have for dissemination during Phase I at least 12 career guidance units, instructional-counseling resources, tests, and descriptions of support services keyed to youth-oriented objectives.

Rating Categories

Very Unacceptable - less than six "acceptable" (as rated on item #2 of this checklist) career guidance units exist in a form appropriate for dissemination
Unacceptable - six to eleven "acceptable" career guidance units exist in an appropriate form
Acceptable - twelve "acceptable" career guidance units exist in an appropriate form
Very Acceptable - more than twelve "acceptable" career guidance units exist in an appropriate form

Staff Product Objective 5: To have for dissemination during Phase I at least 3 competency-based training packages and provide consultations for the training of professional and para-professional counseling personnel who wish to acquire and practice skills in planning, designing, implementing, evaluating, and revising programs and resources in this career planning and development model.

Rating Categories

Very Unacceptable - no staff training or consultation related to skills in planning, designing, implementing, evaluating, and revising programs and resources in career planning and development models exist
Unacceptable - one or two competency-based training packages and consultation related to such skills exist
Acceptable - three competency-based training packages and consulting related to such skills exist
Very Acceptable - more than three comptency-based training packages and consulting related to such skills exist

CHECKLIST

Assessment of Mesa Staff Products

Place an "X" in the box that most nearly represents your perception of the status (as of June 15, 1974) of the attainment of each of the following Mesa Staff Product Objectives. See the attached sheet for the wording of each objective and a definition of the associated rating categories.

	Very Un-acceptable	Un-acceptable	Acceptable	Very Acceptable
Staff Product Objective 1				
Staff Product Objective 2				
Staff Product Objective 3				
Staff Product Objective 4				
Staff Product Objective 5				

PROJECT DIRECTOR'S QUESTIONNAIRE

Assessment of Mesa Staff Products

Please answer all questions on a separate sheet of paper.

Staff Product Objective 6: To have trained counseling personnel (e.g., teachers, counselors, and counselor aides) who will implement the proposed career guidance, counseling, and placement programs in each of the demonstration schools at the elementary, junior high, and senior high levels.

a. During the 1973-74 school year, how many individuals were engaged in implementing selected career guidance, counseling, and placement programs at each demonstration school? (Please identify by name and position.)

b. What special training did these individuals receive to prepare them to implement the selected programs? (Please describe in detail.)

c. What evidence is available to indicate that each training activity helped individuals develop the skills necessary to implement selected career, guidance, counseling, and placement programs? (Please describe in detail.)

Staff Product Objective 7: To have demonstration schools which are equipped with the materials and resources needed to implement the selected career planning and development programs.

a. How many demonstration schools were equipped with the materials and resources necessary for implementing selected career guidance, counseling and placement programs? (Please identify by name and academic level.)

b. What materials and resources were delivered to each school specifically to equip it as a demonstration school? (Please list and specify quantity.)

Staff Product Objective 8: To demonstrate (for site visitors) students actually using the career units and tests while working with project-trained personnel at the elementary, junior, and senior high school levels.

a. How many site visitors viewed demonstrations of students actually using career units and tests while working with project-trained personnel at the elementary, junior, and senior high school levels? (Please specify the number of visitors by position for each academic level.)

b. In detail, please describe the types of demonstrations visitors saw.

Staff Product Objective 10: To have cost-effective career programs (or components of these programs) which can be re-administered during Phase II of this project while other activities are being revised or replaced. These must be programs capable of successfully meeting the changing career planning and development needs of youth as well as the changing needs of society.

a. What information is available on the costs of developing and implementing each of these career programs? (Please describe in detail.)

b. To what extent can cost information be related to the effects of each career program? (Please describe these relationships.)

In the course of accomplishing Staff Product Objectives 6-8 and 10, and Staff Product Objectives 1-5 and 9 (listed below) did you or your staff observe any positive or negative unanticipated outcomes resulting from the related activities? (Please list and explain these outcomes.)

Staff Product Objective 1: To produce an approved, written summary of all goal statements and student performance objectives for developmental career guidance, counseling, and placement programs at grades K, 1, 2, 7 and 10.

Staff Product Objective 2: To have a summary of all career guidance, counseling, and placement activities which are potentially effective for helping students achieve the measurable objectives specified in Staff Product Objective 1. These activities must assist each student to select and achieve both short and long-term goals and to find educational experiences which are functional to his career goals. Such activities should be organized into units (or packages) which outline: (i) desired student outcomes phrased as student performance objectives; (ii) the suggested activities and resources keyed to each objective; and (iii) objective-based evaluation procedures and tests which will both help students assess the extent to which they achieved their objectives, as well as provide data for this project's accountability system.

Staff Product Objective 3: To have an approved, detailed description of the exact settings in which the guidance activities identified in Staff Product Objective 2 will be implemented with students in grades K, 1, 2, 7 and 10 in the demonstration schools.

Staff Product Objective 4: To have for dissemination during Phase I at least 12 career guidance units, instructional-counseling resources tests, and descriptions of support services keyed to youth-oriented objectives.

Staff Product Objective 5: To have for dissemination during Phase I at least 3 competency-based training packages and provide consultations for the training of professional and para-professional counseling personnel who wish to acquire and practice skills in planning, designing, implementing, evaluating, and revising programs and resources in this career planning and development model.

Staff Product Objective 9: To produce an approved, written evaluation rationale which describes the evaluation design and procedures, and lists instrument specifications for assessing the extent to which youth (i.e., in grades K, 1, 2, 7, and 10) in the demonstration and comparison schools have achieved their career planning and development goals and objectives.

APPENDIX B -

Results of the Current Status Assessment

Table 1

ELEMENTARY SCHOOL PROGRAM

		% Counselor Time		
		March 1972	May 1974	Recommended Program
I.	Academic Learning Counseling	10	1	5
II.	Educational-Vocational Counseling	5	1.5	10
III.	Interpersonal Counseling	50	2.5	10
IV.	Intrapersonal Counseling	20	1	10
V.	Conducting Student Registration	2	0	0
VI.	Handling Attendance Concerns	3	0	0
VII.	Conducting and Receiving In-Service Training	10	4	15
VIII.	Supervising Clubs	0	0	0
IX.	Maintaining Guidance Program Organization and Implementation	-	-	30
X.	Engaging in Program Research and Development	-	-	20
XI.	Program Development and Implementation	-	76*	-
XII.	Meetings	-	11.5	-

N = 2

* Categories XI and XII of the May, 1974 program are likely to include the activities in categories IX and X of the recommended program.

Table 2

JUNIOR HIGH SCHOOL PROGRAM

		% Counselor Time		
		March 1972	May 197[illegible]	Recommended Program
I.	Academic Learning Counseling	12	14	13
II.	Educational-Vocational Counseling	10	13	9
III.	Interpersonal Counseling	36	23	33
IV.	Intrapersonal Counseling	27	23	33
V.	Providing School Support- such as conducting student registration and handling non-counseling activities	10	14	7
VI.	Providing Teacher-Staff Counseling	3	7	3
VII.	Conducting Community Activities	2	2	2
VIII.	Career Guidance Program	-	8	-

N = 16 counselors

Table 3

SENIOR HIGH SCHOOL PROGRAM

		% Counselor Time		
		March 1972	May 1974	Recommended Program
I.	Academic Learning Counseling	5	6	10
II.	Educational-Vocational Counseling	10	18	20
III.	Interpersonal Counseling	5	5	20
IV.	Intrapersonal Counseling	5	14	20
V.	Conducting Student Registration	66	43	0
VI.	Handling Attendance Concerns	5	3	0
VII.	Conducting and Receiving In-Service Training	3	3	5
VIII.	Supervising Clubs	1	1	0
IX.	Maintaining Guidance Program Organization and Implementation	-	-	10
X.	Engaging in Program Research and Development	-	-	15
XI.	Conducting Career Guidance Project Activities	-	3*	-
XII.	Conferring with Parents	-	1	-
XIII.	Conferring with Staff	-	2	-
XIV.	Department/School Administrative Duties	-	1	-

N = 13

* Category XI of the May, 1974 program could include activities in categories IX and X of the recommended program

APPENDIX C -

Items and Results: Attitude Sections and Help Inventory Sections of the Survey Tests for the Junior High School Program

APPENDIX C

Attitude Section and Help Inventory Items
from the Part I Survey Test -
Junior High School Program

1. I would like very much to be able to identify the needs I have in areas related to how I feel about myself and how I get along with others.

2. I would like help in school to learn to identify the needs I have in these areas.

3. I would be embarrassed and uptight when someone at school tries to help me identify these needs.

4. Although I might be embarrassed and uptight when someone at school tries to help me identify my needs, I'd be glad that they tried.

5. I would like very much to know more about myself -- especially about my feelings and how they influence my actions.

6. I would like help in school to learn more about myself.

7. I would be embarrassed and uptight when someone at school tries to help me learn more about myself.

8. Although I might be embarrassed and uptight when someone at school tries to help me learn more about myself, I'd be glad that they tried.

9. I would like very much to plan ways that I can understand and feel better about myself and get along better with others.

10. I would like help in school to develop such plans.

11. I would be embarrassed and uptight when someone at school tries to help me develop such plans.

12. Although I might be embarrassed and uptight when someone at school tries to help me develop such plans, I'd be glad that they tried.

13. I would like very much to know how to find someone with whom I can talk when personal problems arise.

14. I would like help in school in order to learn how to choose and contact such people.

15. I would be embarrassed and uptight when someone at school tries to help me learn how to choose and contact such people.

16. Although I might be embarrassed and uptight when someone at school tries to help me learn about such people, I'd be glad that they tried.

17. During the past six weeks, have you received any help at school in any of the following areas? (Check "yes" or "no" for each item.)

a. Help in identifying your needs related to how you feel about yourself and how you get along with others. Yes____ No____

b. Help in knowing more about yourself -- especially about your feelings and how they influence your actions. Yes____ No____

c. Help in understanding yourself, in feeling better about yourself, and in getting along with others. Yes____ No____

d. Help in learning how to choose and contact people with whom you can talk when personal problems arise. Yes____ No____

APPENDIX C

Attitude Section and Help Inventory Items from the Part II Survey Test - Junior High School Program

1. I would like very much to get in touch with my emotions.
2. I would like help in school to learn to get in touch with my emotions.
3. I would be embarrassed and uptight when someone at school tries to help me get in touch with my emotions.
4. Although I might be embarrassed and uptight when someone at school tries to help me get in touch with my emotions, I'd be glad that they tried.
5. I would like very much to understand how my emotions affect my behavior.
6. I would like help in school to learn how my emotions affect my behavior.
7. I would be embarrassed and uptight when someone at school tries to help me learn how my emotions affect my behavior.
8. Although I might be embarrassed and uptight when someone at school tries to help me learn how my emotions affect my behavior, I'd be glad that they tried.
9. I would like very much to understand how my emotions affect how people feel about me.
10. I would like help in school to learn how my emotions affect how people feel about me.
11. I would be embarrassed and uptight when someone at school tries to help me learn how my emotions affect how people feel about me.
12. Although I might be embarrassed and uptight when someone at school tries to help me learn how my emotions affect how people feel about me, I'd be glad that they tried.
13. I would like very much to be better able to express love.
14. I would like help in school to learn how to express love.
15. I would be embarrassed and uptight when someone at school tries to help me learn how to express love.
16. Although I might be embarrassed and uptight when someone at school tries to help me learn how to express love, I'd be glad that they tried.

17. During the past six weeks, have you received any help at school in any of the following areas? (Check "yes" or "no" for each item.)

a. Help in getting in touch with your emotions. Yes____ No____

b. Help in understanding how your emotions affect your behavior. Yes____ No____

c. Help in understanding how your emotions affect how other people feel about you. Yes____ No____

d. Help in becoming better able to express love. Yes____ No____

APPENDIX C
Results on the Attitude Section and
Help Inventory Section of the
Part I and Part II Survey Tests
Junior High School Program

Part 1	Poston Experimental			Powell Experimental			Poston Control		
	Pre	Post	△	Pre	Post	△	Pre	Post	△
13) Agree	93%	81%	-12				85%	72%	-13
Disagree	7%	19%	+12				15%	28%	+13
Number	114	112					66	61	
14) Agree	80%	64%	-16				73%	39%	-34
Disagree	20%	36%	+16				27%	61%	+34
Number	114	112					56	61	
15) Agree	39%	44%	+5				45%	56%	+11
Disagree	61%	56%	-5				55%	44%	-11
Number	114	112					58	59	
16) Agree	89%	82%	-7				73%	54%	-19
Disagree	11%	18%	+7				27%	46%	+19
Number	114	112					62	63	
17) Agree	84%	83%	-1				64%	70%	+ 6
Diagree	16%	17%	+1				36%	30%	- 6
Number	114	112					59	60	
18) Agree	61%	57%	-4				76%	48%	-28
Diagree	39%	43%	+4				24%	52%	+28
Number	114	112					96	60	
19) Agree	41%	48%	+7				48%	59%	+11
Diagree	59%	52%	-7				52%	41%	-11
Number	114	112					54	63	
20) Agree	86%	81%	-5				72%	62%	-10
Disagree	14%	19%	+5				28%	38%	+10
Number	114	112					58	61	
21) Agree	92%	78%	-14				85%	70%	-15
Disagree	8%	22%	+14				15%	30%	+15
Number	114	112					59	61	
22) Agree	62%	64%	+2				52%	40%	-12
Disagree	38%	36%	-2				48%	60%	+12
Number	114	112					58	62	
23) Agree	42%	40%	-2				45%	43%	- 2
Disagree	58%	60%	+2				55%	57%	+ 2
Number	114	112					58	58	

APPENDIX C

Part I	Poston Experimental Pre	Post	Δ	Powell Experimental Pre	Post	Δ	Poston Control Pre	Post	Δ
24) Agree	82%	80%	-2				67%	59%	- 8
Disagree	18%	20%	+2				33%	41%	+ 8
Number	114	112					57	59	
25) Agree	73%	78%	+5				73%	59%	-14
Disagree	27%	22%	-5				27%	41%	+14
Number	113	113					59	63	
26) Agree	60%	60%	0				51%	40%	-11
Disagree	40%	40%	0				49%	60%	+11
Number	113	113					57	62	
27) Agree	42%	41%	-1				45%	51%	+ 6
Disagree	58%	59%	+1				55%	49%	- 6
Number	113	113					58	61	
28) Agree	81%	81%	0				78%	62%	-16
Disagree	19%	19%	0				22%	38%	+16
Number	113	113					58	60	
29a) Yes	35%	51%	+16				40%	27%	-13
No	65%	49%	-16				60%	73%	+13
Number	110	105					58	60	
29b) Yes	35%	54%	+19				28%	20%	- 8
No	65%	46%	-19				72%	80%	+ 8
Number	107	104					58	60	
29c) Yes	49%	52%	+3				55%	27%	-28
No	51%	48%	-3				45%	73%	+28
Number	107	103					58	59	
29d) Yes	36%	60%	+24				36%	22%	-14
No	64%	40%	-24				64%	78%	+14
Number	107	107					58	60	
30) Yes	58%	53%	-5				53%	24%	-29
No	42%	47%	+5				47%	76%	+29
Number	77	81					49	49	
31) Percent	17%	10%	-7				22%	0%	-22
Number	119	114					59	62	

APPENDIX C

Part II	Poston Experimental			Powell Experimental			Poston Control		
	Pre	Post	△	Pre	Post	△	Pre	Post	△
1. Agree	78%	81%	+3	83%	84%	+1	75%	71%	-4
Disagree	22%	19%	-3	17%	16%	-1	25%	29%	+4
Number	102	107		257	358		57	62	
2. Agree	34%	54%	+20	61%	68%	+7	32%	35%	+3
Disagree	66%	46%	-20	39%	32%	-7	68%	65%	-3
Number	102	107		262	352		59	62	
3. Agree	54%	48%	-6	41%	32%	-9	52%	59%	+7
Disagree	46%	52%	+6	59%	68%	+9	48%	41%	-7
Number	102	107		251	351		60	61	
4. Agree	77%	81%	+4	80%	78%	-2	63%	56%	-7
Disagree	23%	19%	-4	20%	22%	+2	37%	44%	+7
Number	102	107		247	358		57	63	
5. Agree	75%	82%	+7	85%	84%	-1	77%	79%	+2
Disagree	25%	18%	-7	15%	16%	+1	23%	21%	-2
Number	102	107		248	350		57	61	
6. Agree	45%	59%	+14	48%	64%	+16	47%	42%	-5
Disagree	55%	41%	-14	52%	36%	-16	53%	58%	+5
Number	102	107		241	351		58	62	
7. Agree	46%	47%	+1	41%	35%	-6	40%	54%	+14
Disagree	54%	53%	-1	59%	65%	+6	60%	46%	-14
Number	102	107		244	344		58	57	
8. Agree	79%	81%	+3	78%	76%	-2	72%	66%	-6
Disagree	21%	19%	-3	22%	24%	+2	28%	34%	+6
Number	102	107		242	346		57	62	
9. Agree	84%	85%	+1	90%	84%	-6	79%	77%	-2
Disagree	16%	15%	-1	10%	16%	+6	21%	23%	+2
Number	102	107		240	346		57	62	
10. Agree	54%	59%	+5	78%	73%	-5	51%	45%	-6
Disagree	46%	41%	-5	22%	27%	+5	49%	55%	+6
Number	102	107		243	340		57	64	
11. Agree	43%	44%	+1	48%	38%	-10	41%	58%	+17
Disagree	57%	56%	-1	52%	62%	+10	59%	42%	-17
Number	102	107		251	348		58	62	
12. Agree	81%	79%	-2	78%	73%	-5	65%	56%	-9
Disagree	19%	21%	+2	22%	27%	+5	35%	44%	+9
Number	102	107		242	350		57	62	

APPENDIX C

Part II	Poston Experimental			Powell Experimental			Poston Control		
	Pre	Post	△	Pre	Post	△	Pre	Post	△
13. Agree	76%	84%	+8	86%	84%	-2	80%	72%	-8
Disagree	24%	16%	-8	14%	16%	+2	20%	28%	+8
Number	97	104		235	352		5[illegible]	61	
14. Agree	48%	50%	+2	60%	68%	+8	38%	38%	0
Disagree	52%	50%	-2	40%	32%	-8	62%	62%	0
Number	97	104		227	348		56	60	
15. Agree	49%	47%	-2	55%	42%	-13	51%	53%	+2
Disagree	51%	53%	+2	45%	58%	+13	49%	47%	-2
Number	97	104		234	354		57	60	
16. Agree	76%	77%	+1	75%	77%	+2	55%	60%	+5
Disagree	24%	23%	-1	25%	23%	-2	45%	40%	-5
Number	97	104		227	349		55	60	
17a. Yes	26%	54%	+28	26%	69%	+43	18%	17%	-1
No	74%	46%	-28	74%	31%	-43	82%	83%	+1
Number	96	104		212	337		55	60	
17b. Yes	36%	56%	+20	34%	76%	+42	33%	28%	-5
No	64%	44%	-20	66%	24%	-42	67%	72%	+5
Number	96	103		210	337		55	61	
17c. Yes	42%	52%	+10	48%	71%	+23	15%	23%	+8
No	58%	48%	-10	52%	29%	-23	85%	77%	-8
Number	95	103		209	334		54	61	
17d. Yes	17%	41%	+24	32%	65%	+33	24%	20%	-4
No	83%	59%	-24	68%	35%	-33	76%	80%	+4
Number	95	101		206	330		55	60	
18. Yes	34%	48%	+14	46%	59%	+13	29%	20%	-9
No	66%	52%	-14	54%	41%	-13	71%	80%	+9
Number	64	83		167	314		45	51	
19. Percent	5%	12%	+7	15%	23%	+8	2%	2%	0
Number	116	117		167	314		66	63	